

1936 CATALOG



for **FORD DEALERS**

FOREIGN DEPT.
90 WEST ST.
NEW YORK CITY

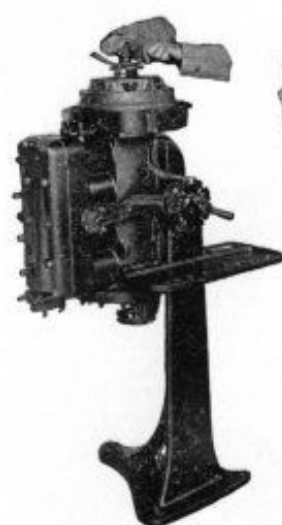
WEST COAST
722 MATEO ST.
LOS ANGELES

THE KRW ALL-POSITION MOTOR STAND

No. V-40 \$4.75

A DROP FORGING

*Attachment for the
V-8*

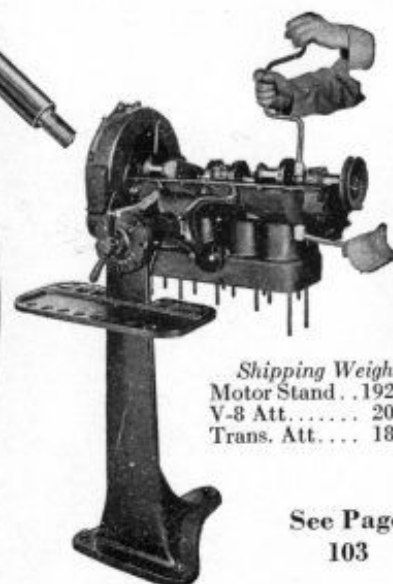
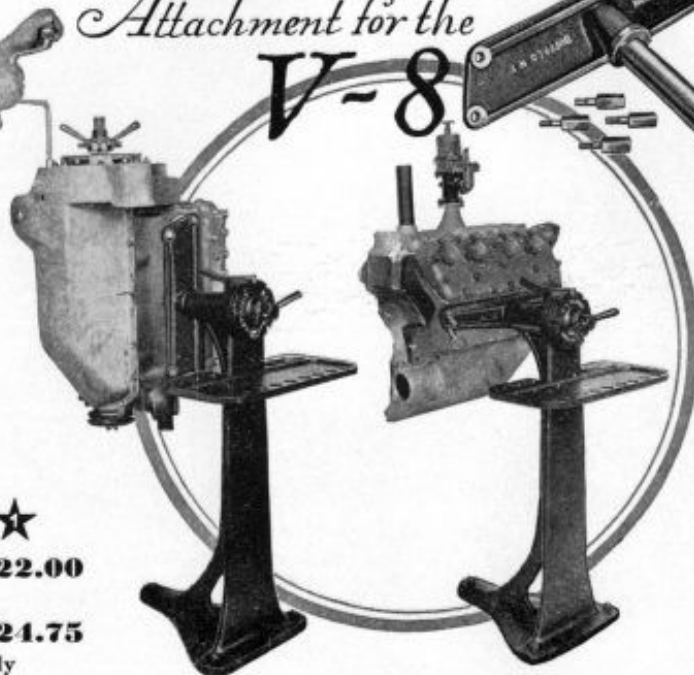


No. 35 Price \$22.00

For T-A and B

No. 35V Price \$24.75

Equipped For V-8 Only



Shipping Weights
Motor Stand . . 192 lbs.
V-8 Att. 20 lbs.
Trans. Att. . . . 18 lbs.

See Page
103

The KRW All-Position Motor Stand is designed to give the mechanic every advantage of convenient positions. A glance at the pictures will convince you its handiness is more than equal to an extra pair of hands while installing fly wheels, housings, clutches, crankcases, etc., which must be held in alignment while being fastened in place. Time studies prove this Motor Stand cuts labor costs 20 to 50 per cent over other makes because the mechanics can work to the best advantage on all operations. It is regularly equipped with a bracket to handle T-A-B Engines. Adapters are quickly interchangeable to handle the new V-8, also Transmissions. This stand will pay for itself on a few jobs. More than 7200 in use—Modernize your shop now.

Oil Pans for KRW Motor Stand

No. 141

Price \$2.50

Crated Weight 20 Pounds

Following out the idea of cleanliness in Ford repair shops, we now offer an Oil Pan especially designed for the KRW Motor Stand. Size 20x34 inches with a $\frac{3}{8}$ inch wire beaded edge all around. This pan is made from black sheet steel, then hot galvanized. It keeps the oil, grease and dirt off the floor and promotes an interest on the part of the mechanic for cleanliness. We also make a similar size pan for front wheel repairs, shown on another page.

See Page 32

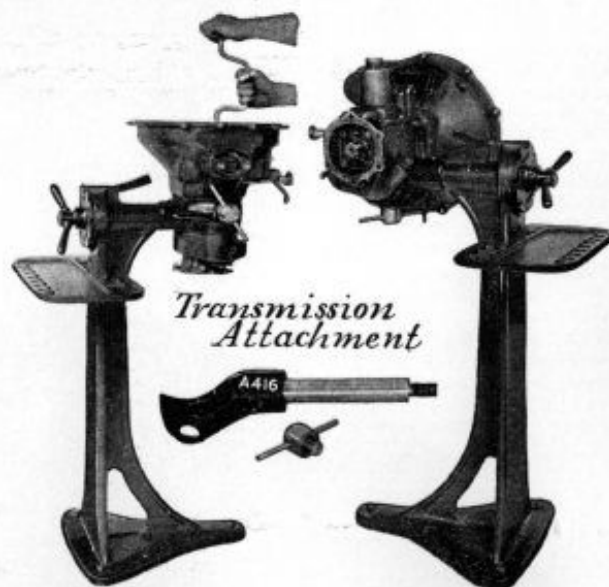


The KRW V-8 Engine Merchandiser

A brand new "revolving" Engine Display Stand for your Salesrooms and Service Departments. Use one of those factory rebuilt engines you have in stock to sell the Public on the SIMPLICITY OF A FORD V-8. Also Motor Exchanges by convincing the customer that he gets the equivalent of a brand new engine and not just an "overhaul" job. See Page 98.

Transmission Attachments

No. A416 (Car) Price \$4.00

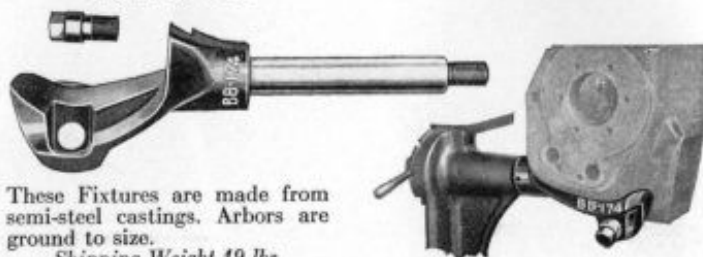


*Transmission
Attachment*

These attachments enable your Mechanics to do Better Work by holding the transmission in every convenient position. Cuts labor costs in half. Pleases customers to see their job done in such a workmanlike manner.

For 4 Speed Truck Transmission

No. BB-174 Price \$4.50

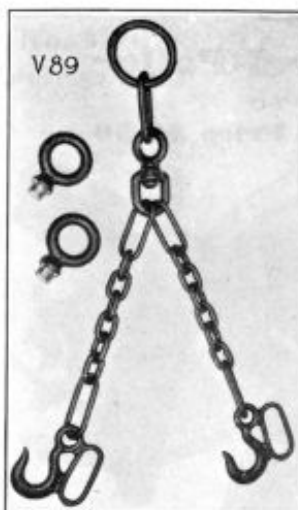


These Fixtures are made from semi-steel castings. Arbors are ground to size.

Shipping Weight 19 lbs.

KRW "V-8 & 40" Motor Lifting Hooks

No. V89 Price \$7.00



These KRW Motor Lifting Hooks are designed especially for the V-8 Models. They are well made and convenient to use. "Eye bolts" are furnished for use in the spark plug holes of Model "18" and special brackets utilizing two studs on each side of the "40" which is equipped with aluminum cylinder heads.



KRW "V-8" Motor Dollie

No. V-163

Price \$12.50

Shipping Wt. 105 Lbs.



This KRW Motor Dollie for "V-8" is one of the handiest pieces of equipment you can buy. It saves Time and Space. Enables Mechanics to move Engines anywhere with the least amount of effort or danger of damage by careless handling. Hundreds of Ford Dealers are using them to display "V-8" Motors on their Show Room Floors and "Rebuilt" in their Parts Departments thus taking Full Advantage of the Advertising Value of Material usually carried in stock in unseen, out-of-the-way places. This Dollie is strongly built of steel and semi-steel castings with ball bearing swivel casters. Order a couple of these and get big "dividends" in labor saved.

"V-8" Attachments Only \$6.50

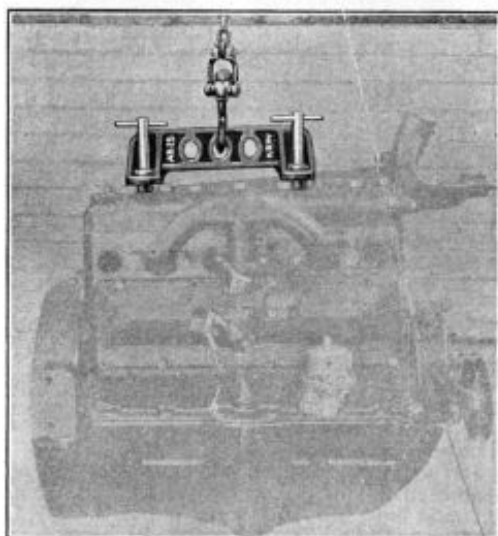
To fit previously built KRW Motor Dollies, originally designed for Model T—A or B.

Motor Lifting Hook for "A and B"

No. AB25

Price \$4.25

The KRW Motor Lifting Hook for A and B Engines does the job perfectly and quickly without damaging the engine or other parts. The Bracket is a steel casting. Three "eye holes" are provided to properly balance the engine only or the engine and transmission assembly. Play safe—Do the job right—Save Time.

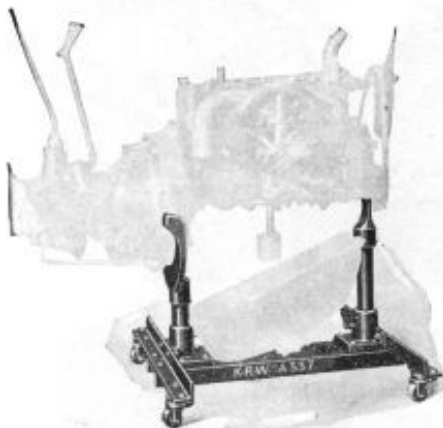


KRW Model "A" Motor Dollie

\$12.50

No. A337

This Dollie has been perfected to serve as a convenient means of transporting Model "A" motors around shop and show room and is also designed so that 75% of the assembly or disassembly operations can be performed on it, which for various reasons might otherwise tie up a Motor Stand. These low prices will enable you to buy several of them for storage and display of your motors. Order today.



Shipping Wt. 90 Lbs.

VERY LOW PRICES

We are now selling Model T and Tractor Tools also some Model A and B tools at ridiculous prices. If interested send us a list for prices.

K R W "Individual" Mechanics Tool Toter
No. 477 Price \$12.00
(Lots of 4, \$11.00 each)

Made of
16 Gauge Steel



Shipping Weight
95 Pounds
Crated

NEW!
LARGER - HEAVIER - CHEAPER

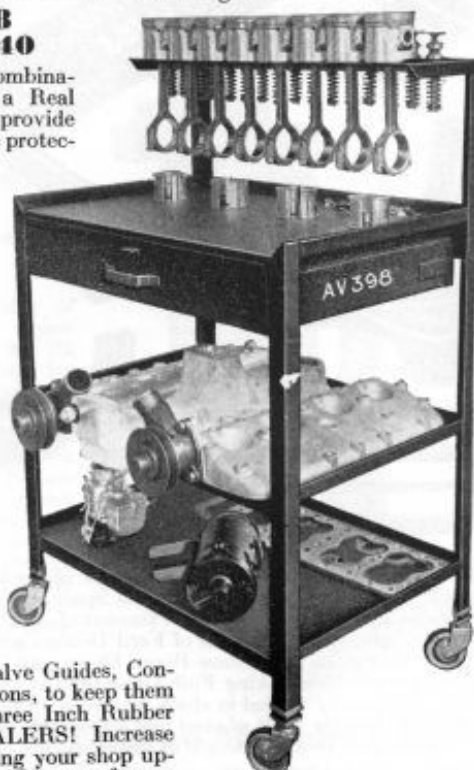
Top—25x21x4 inches
 Drawer—25x18 $\frac{3}{4}$ x4 inches
 Angles—1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$

ELECTRIC WELDED JOINTS — 3-INCH RUBBER CASTERS

KRW Combination Tool Toter
"For Fours and Eights"

No. AV398
Price \$11.40

This New KRW Combination Tool Toter is a Real Time Saver! Shelves provide plenty of space for the protection of parts ordinarily removed from the engine while grinding valves, changing pistons, rods or other minor operations.—Electric Welded Angle Steel Frame.—Top 12 Ga. Steel Plate, 27 $\frac{1}{2}$ x18 $\frac{1}{2}$ and 32 inches from the floor.—Drawer 24x18x4, with hasp, provides plenty of room for Mechanics tools.—Rack 1/8th Plate is punched with spaces for Valves, Valve Guides, Connecting rods and Pistons, to keep them in proper order.—Three Inch Rubber Tired Casters. **DEALERS!** Increase the efficiency and bring your shop up-to-date to inspire confidence of your customers by installing one for each Mechanic in your motor and Quick Service Departments.



Shipped from our factory
 Arcade, N. Y.
 Weight Crated, 90 pounds

See page 67 for Steel Tool Cabinets

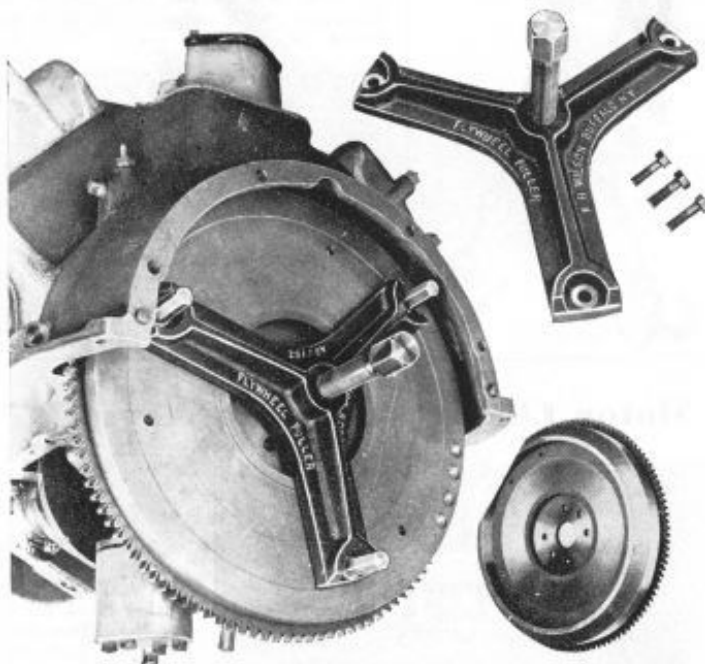
Two New Fly-Wheel Pullers Are Required
for 1935 Cars and Trucks

KRW Fly-Wheel Puller

For 1935 Cars Only

No. V-168

Price \$2.50



IMPORTANT! See page 254, Fig. 368 January 1935 and page 268, Fig. 379 February 1935 Ford Service Bulletins for complete explanations

KRW Fly-Wheel Puller

For 1929 to 1934 Cars and 1935 Trucks and Zephyr

No. ABV-162

Price \$3.00



Both Wheel Pullers are made of semi-steel castings, carefully machined in jigs. Screws and Fittings of heat treated alloy steel. **YOU NEED BOTH OF THEM.**

KRW Multiple Disc Clutch Compressor

A-301 \$5.00

The early Model "A" Cars equipped with multiple disc clutches are now coming in for major repairs and general overhauling. Without this tool it is a difficult matter to correctly center and align the alternate clutch plates.



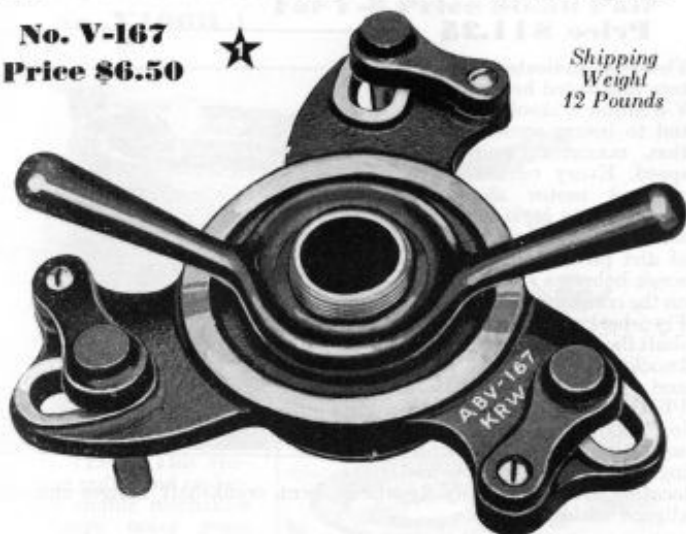
KRW Clutch Compressor

For Cars and Trucks 1929 to 1936 Incl. and Zephyr

No. V-167
Price \$6.50

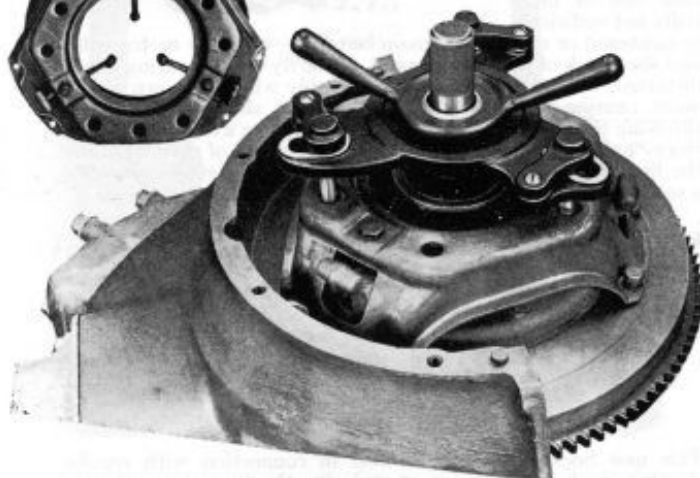


Shipping
Weight
12 Pounds



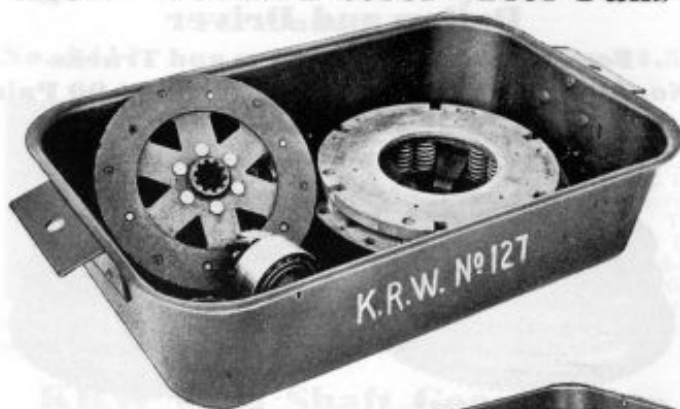
SEE! Page 274 March 1935
Ford Service Bulletin

This improved KRW Clutch Compressor and Locator handles all Single Plate Clutches used on A-B and V-8 Fords since 1928. 1935 cars and trucks have new type clutches bolted on the face of the fly-wheel which if removed or replaced must be located with a Compressor and Pilot Shaft in the same manner they were originally assembled at the factory. Unless properly centered the fly-wheel will be thrown out-of-balance, then mis-alignment of the "splined" transmission shaft will cause engine vibration, clutch slippage, excessive noise and loss of power. This tool compresses the clutch "fingers" uniformly and far enough that the clutch assembly can be laid "flat" against the fly-wheel while being bolted in place. Therefore the flat surface on the clutch assembly which is often distorted and bent during this operation is not damaged. YOU NEED ONE!



When clutches are replaced the engine should be in a vertical position if possible. Use a KRW "All-Position" Motor Stand.

KRW "Pressed Steel" Tote Pans



No. 127

Price \$1.40 Each

Lots of six or more
weight 12 pounds each



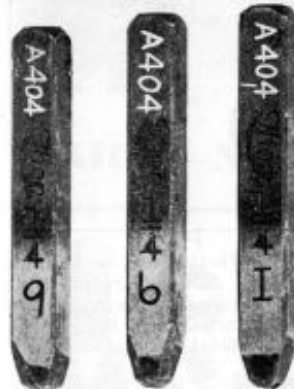
KRW Tote Pans are superior to nearly all other types we have ever seen. They are heavy one-piece construction, being stamped from 16-gauge steel (1/16 of an inch). Inside measurements at the top, 22 x 14 x 5 3/4. Capacity, five gallons. This type of Tote Pan has a hundred and one uses around a shop and may be used for keeping the individual parts of a car together and in good condition for draining crank-cases, rear axles, etc., also for storage of new parts. Every Ford dealer can use from six to two dozen of these pans to good advantage. Keep your shop clean and in orderly condition.

New Design Engine Block Figures

No. A404 Price \$1.50

For Three Stamps Shown

The design of engine numbers has been changed to lessen the possibility of outside individuals attempting to change engine numbers. The figures 1-6-9 have been changed. Dealers should immediately provide themselves with the new figures—One-Six-Nine. Ford Service Bulletin, February, 1931.



No. A404B

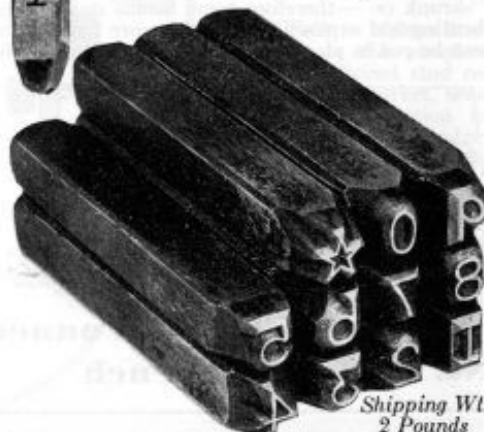


Price \$5.50

Complete set of 11 including star as shown

WARNING!

Some States have enacted laws requiring Special Marking of Rebuilt or Exchanged Engines, with certain letters prefixing or affixing the number. We can supply any letter in the alphabet to match the above figures at 75c each, on special order, requiring 5 days for delivery.



Shipping Wt.
2 Pounds

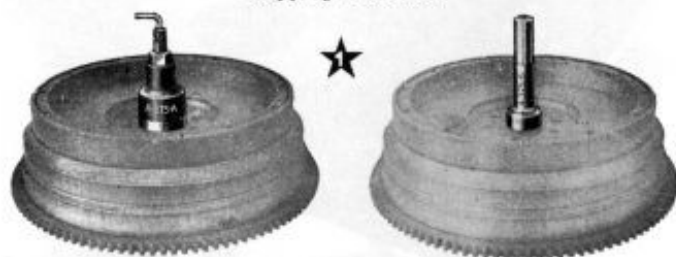
☆ A I 2 3 4 5 6 7 8 9 0 ☆ NEW

☆ A 1 2 3 4 5 6 7 8 9 0 ☆ OLD

KRW Fly-Wheel Ball Bearing Puller and Driver

For All A-B and V-8 Cars and Trucks
No. A375A Price \$4.00 Pair

Shipping Wt. 4 Lbs.



Another pair of tools, seldom used, but very valuable when you need them. Consider the time wasted trying to remove a broken or worn ball race from the flywheel. It is important that the race be pulled out squarely, otherwise the recess in the flywheel will be enlarged and the new bearing loose—eventually causing trouble and mis-alignment of the transmission shaft. Every dealer should have a set.

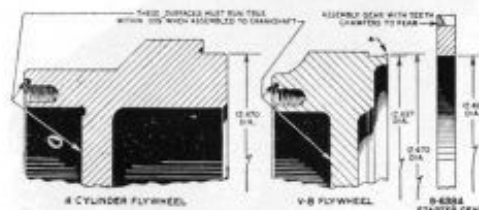
Fly Wheel—Starter Ring Gear Heater

No. V91

Price \$4.75



The KRW Gas operated Flywheel Ring Gear Heater will be found a valuable addition to your Service equipment. Ring gears must be "shrunk on"—therefore some means must be provided for uniformly heating and expanding this gear more than 60 thousandths before they can be put in place. Operates on natural or artificial gas.



Full Instructions
are given on Page
90, Jan. - Feb.
1933 Ford Service
Bulletin.

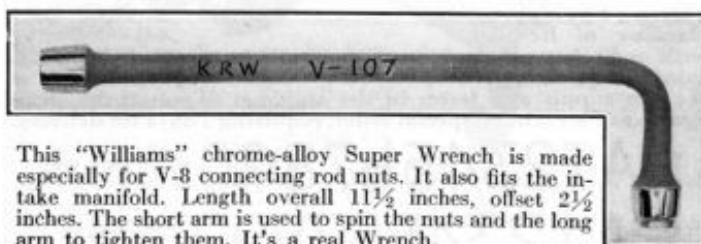
Shipping Weight
35 Lbs.

Williams "V-8" Connecting Rod Wrench

No. V107

Wrench

Price \$1.25



This "Williams" chrome-alloy Super Wrench is made especially for V-8 connecting rod nuts. It also fits the intake manifold. Length overall 11½ inches, offset 2½ inches. The short arm is used to spin the nuts and the long arm to tighten them. It's a real Wrench.

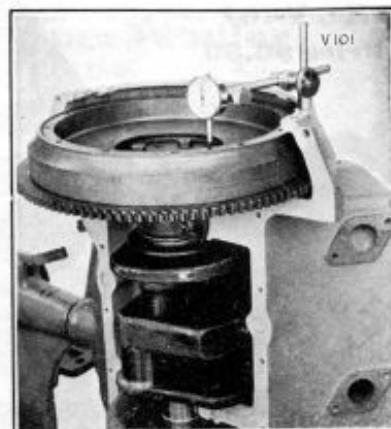
Fly-Wheel Dial Indicator Gage

No. V101

For "V-8" Only

Price \$11.25

The Dial Indicator and Fixture illustrated herewith on a V-8 Motor is absolutely essential to insure smooth operation, maximum power and speed. Every rebuilt or exchanged motor should be tested while it is being assembled. A slight amount of dirt pushed out of a cap-screw hole or a slight "niche" on the crankshaft between the Fly-wheel recess and crankshaft flange will cause wobble, knocking and loss of power and pick-up. INSURE A PERFECT JOB by "checking" as you assemble the motor. Also used for diagnosing the cause of trouble and locating loose or wobbly fly-wheels, bent crankshaft flanges and mis-aligned main bearings.



KRW Fly-Wheel Dial Indicator Gage

For A and B Engines

Price \$11.75

No. A320

The KRW Special Fly-wheel dial indicator is absolutely necessary to check—for loose and wobbly fly-wheels, bent crankshaft flanges, mis-aligned main bearings, warped and distorted fly-wheel housings. No dealer can afford to take the chance of assembling a motor without testing every operation progressively—to insure perfect alignment of all parts. Example: If the fly-wheel wobbles due to a bent crankshaft flange, dirt or metal between the flange and fly-wheel recess—one or more bolts not sufficiently tightened or mis-aligned main bearings—then the motor will vibrate and show lack of power and speed. If the fly-wheel housing is warped or distorted, then the transmission assembly will be thrown out of alignment, causing excessive wear on the gears, shafts and bearings, often throwing them out of engagement while pulling a load. Again it's the old story "an ounce of prevention is worth a pound of cure." Do it right in the first place. It means a pleased customer—a good reputation—and a satisfactory profit to your shop.



Starting Crank Ratchet Wrench

No. V132

Price 90 Cents

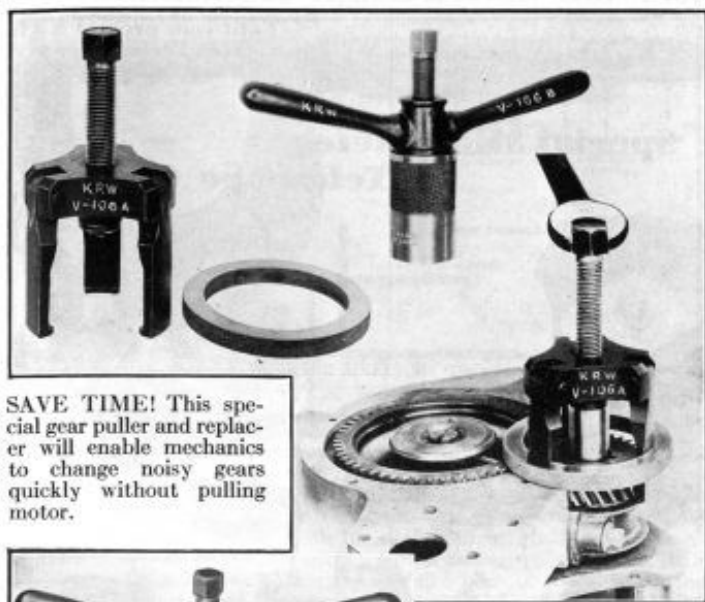


This new Socket Wrench is used in connection with regular Ford starting crank for removing or replacing the starting crank ratchet on all Ford cars and trucks built since 1927.

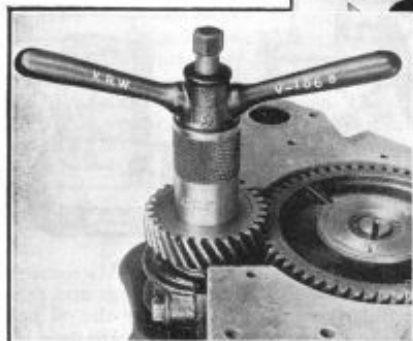
Your sign says—FORD SALES and SERVICE
—Together They Mean Success.

Crankshaft Gear Puller — Press

★ No. V106A }
No. V106B } For V-8 Price \$6.50 Pair



SAVE TIME! This special gear puller and replacer will enable mechanics to change noisy gears quickly without pulling motor.



The K R W Crankshaft Gear Puller is a husky tool designed especially for the job. The gear is located in a recess—hard to get at—therefore all parts must be made tough and strong. The Replacer screws into the end of the crankshaft and presses the gear in place quickly and easily. Avoid driving this gear on. You are liable to spring the

crankshaft and damage the rear main bearing. The Body and Arms are made from drop forgings of alloy steel carefully machined and heat treated to make them tough and durable. The screws are nickel steel. Save time and money by having a set of these tools handy.

KRW Crankshaft Gear Puller

For A and B Motors

No. A410
Price \$2.75

Shipping Weight
5 Pounds



The KRW Crankshaft Timing Gear Puller is a very strong tool—made entirely of alloy steel drop forgings, carefully machined and heat treated. The Screw is Nickel Steel. These tools often more than pay for themselves on the first job they are used, by the saving of time over any other method.

KRW Crankshaft Gear Press

For A and B Engines

No. A411 Price \$1.50



The KRW Crankshaft Gear Press is a companion for the KRW Crankshaft Gear Puller shown in opposite column. It is used for replacing the gear without removing the Crankshaft. The Stud screws into the end of the Crankshaft in place of the starting crank ratchet, then the

large nut forces the gear squarely into place. It makes an easy and inexpensive operation of changing Noisy Timing Gears.

KRW Cam Shaft Gear Puller

For Model A and B

No. A372 Price \$1.15

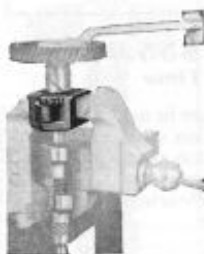
This puller is a very important tool. The jaws are accurately machined to fit squarely against the sides of the gear, to apply uniform pressure and prevent distortion. At the extremely low price, you certainly want one.



KRW Cam Shaft Vise

For A and B

No. A371 Price \$1.00



Many Cam Shafts have been damaged as a result of being held in an ordinary vise while fastening or unfastening the lock nut and removing the fibre timing gear. This inexpensive babbitt lined vise will hold the cam shaft securely and prevent any damage to those accurate and highly finished surfaces.

KRW—Nelson Stud Remover

No. 434

★ Price \$3.50

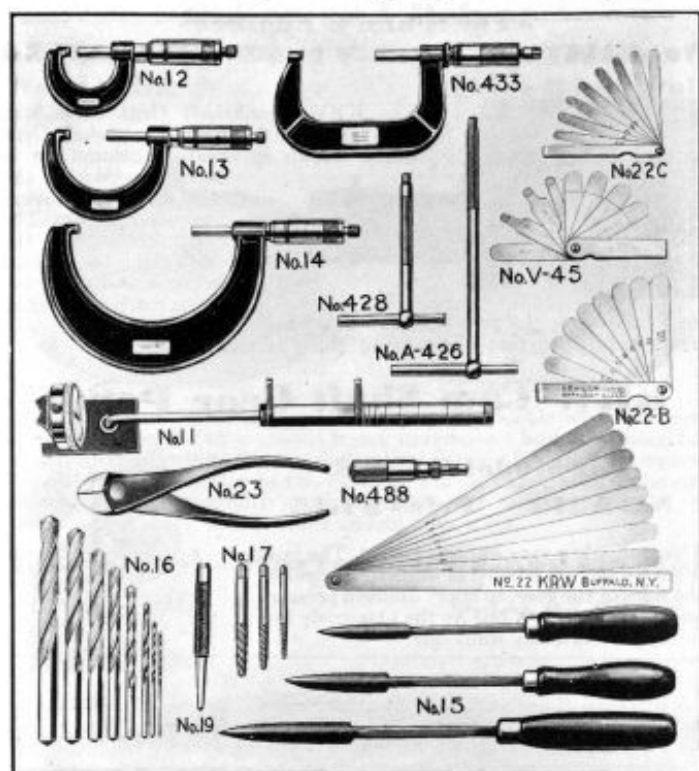


The K R W — Nelson Stud Remover is the simplest and most efficient stud remover on the market, used on regular production in Ford, Plymouth, Dodge, DeSoto and Timken Axle Plants. Fits studs 5/16" to 7/16" inclusive. Can be used with standard makes of speed, socket, "T" handle, ratchet and "S" wrenches. Tough forgings are used in its construction. All parts are accurately machined and interchangeable. No other stud remover compares with it

LOCATION MEANS VERY LITTLE

No matter where you are, Fords are also. If you are prepared to give Ford Owners better Service than your competitors, they will find you, no matter if they have to cross rivers and climb mountains to do it. Some Ford Owners are particular and many of them have their "whims" but they want, and most of them are ready and willing to pay reasonable prices for Real Ford Service—if they can get it.

Micrometers, Gauges, Feelers, Etc.



Group 2 Price \$55.00 If Entire Lot is Ordered at One Time

No. 11	Ames Indicating Dial Gauge (See picture in next Col.)	15.00
★ No. 12	1 inch Slocumb Micrometer with friction stop	5.75
★ No. 13	2 inch Slocumb Micrometer with friction stop	6.35
★ No. 14	4 inch Slocumb Micrometer with friction stop	7.65
★ No. 433	2 to 3 inch "Special" Micrometer for Bearings	7.00
No. 488	3 to 4 inch Reed "Inside" Micrometer	4.00
No. 15	Set (3) Bearing Scrapers	3.00
No. 16	Set (9) Assorted Drills up to 1/2 inch Inclusive	2.00
No. 17	Set (3) EZY-OUT TAPS for removing broken Cap Screws	1.25
No. 19	Starrett Center Punch	.20
No. 22	Feeler Gauge with eight 9x1/2 Blades	1.00
No. 22B	Feeler Gauge with eight 3x1/2 Blades	.50
No. 22C	Feeler Gauge with eight 3x1/4 Blades	.60
No. V45	Step Feeler Gauge (6 for \$7.50)	1.40
No. 23	Diagonal Side Cutting pliers, 6 1/2 inch size	1.00
★ No. A426	Telescope Gauge (cylinders, bearings etc.)	2.25
No. 428	Telescope Gauge for Rear Main Bearing	2.25

\$61.20

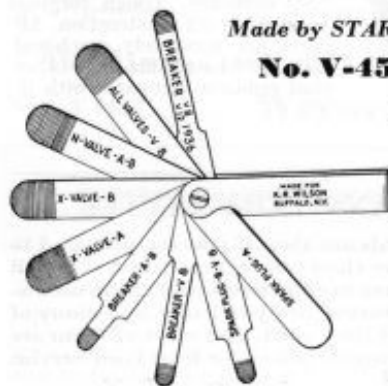
Every Tool in this group is necessary for Motor Repair Work and is of the highest quality and accuracy obtainable. KRW Prices represent a substantial saving from manufacturers' List Prices or any other price you will pay elsewhere for the same quality of merchandise. YOUR MECHANICS may be interested to purchase some of these items for their own use.

KRW "Step" Feeler Gauge

Made by STARRETT for KRW Exclusively

No. V-45 Price \$1.40

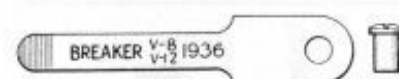
Six for \$7.50



MECHANICS! This Tool was designed by Ford Service Engineers to save your time and prevent mistakes. Eight Blades are GO and NO-GO GAUGES, accurately ground to quarter thousandth limits. Another Blade has just been added for the 1936 V-8 and V-12 Breaker Points and should be purchased for those gauges now in use. It eliminates all guesswork be-

cause the correct dimensions are built into it, nothing to remember and nothing to forget. Get your Boys together—every mechanic will order one. SEE Fig. 64-65 August 1932 Ford Service Bulletin for complete details.

No. V-45B Extra Blade & Thimble 35c



To fit your present KRW Step Feeler Gauge
Six for \$1.75

Special Micrometer, Telescope Gauges

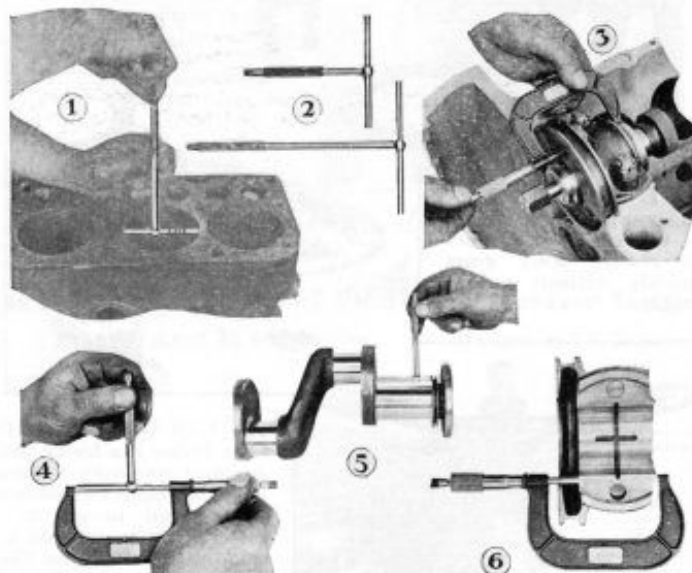


Fig. 3-4-6 show No. 433 Special, 2 to 3 inch, "square frame" Micrometer required for checking the length of "V-8" rear main bearings and caps while being faced off. Ordinary micrometers will not clear the oil pan seal on this bearing cap. Fig. 1-2 show Telescope Gauge No. 426 used for checking cylinders and rear hub bores. The points are rounded to fit the contours of a circle. Fig. 2-4-5 shows No. 428 Telescope Gauge with "flat" points used for checking the space between flanges of the Crankshaft. Telescope Gauges have proven superior to Inside Mikes for the purposes we have recommended because no skill or experience is required to get accurate results,—just place the Gauge in the Cylinder bore, Hub bore or Crankshaft Main Bearing as indicated in Fig. 1-5, then tighten the lock nut on the end of the handle. Then, transfer these measurements to a regular Micrometer as shown in Fig. 4. They will help you sell Engine Exchanges by showing your customer the exact condition of his cylinders.

See Page 45 August 1932 Ford Service Bulletin.

Ames Indicating Dial Gauge

The most practical tool ever made for checking wear, taper, etc. in cylinder bores

No. 11 Price \$15.00

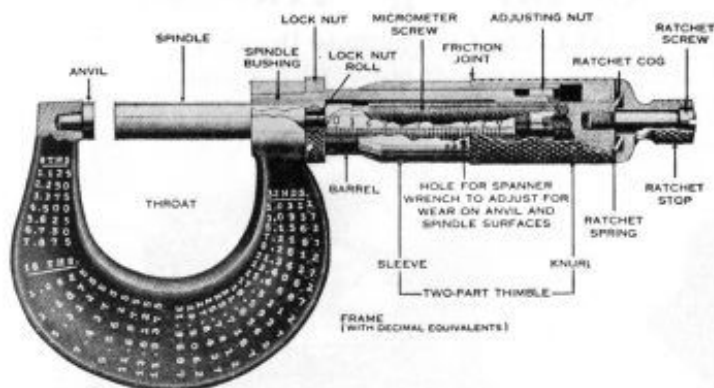
Extensions to handle all sizes from 2 1/2 to 6 inches are included



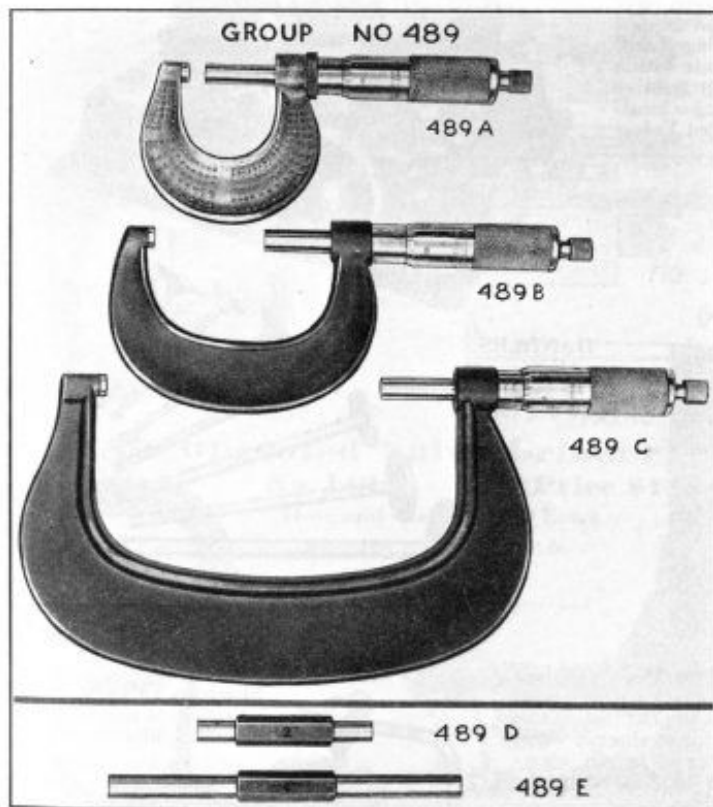
For Fifteen Years we have handled and recommended Ames Indicating Dial Gauges as one of the most valuable tools for a Motor Repair Shop. It gives you accurate information on cylinder wear. Shows up tapered and out-of-round cylinders caused by "cocked" pistons etc. With such information you are then enabled to correct the cause of the trouble. This new model has for a part of its handle (which is removable) a new Gauge, adjustable to any size by sixteenths for use in setting the Dial to a Standard size, at "Zero". Tools like this convince customers.

Reed Micrometers

"As Good As The Best"



Reed Micrometers rank with the BEST in quality and workmanship and will meet the most exacting requirements for accuracy and long service. They are manufactured, tested and adjusted to Johansson Master Gauges. The Cutaway picture shows just how they are constructed and the simplicity of adjustment if ever necessary. REED uses a Tool Steel Spindle (the heart of a micrometer) made by a special process giving a finished thread of Unequalled Precision, Smoothness and Hardness. The Frame is a drop forging. The Ratchet Stop is designed to bring the same pressure between anvil and spindle for all measurements. Most Mechanics prefer to depend on it in securing accurate measurements rather than their sense of touch. Reed Micrometers have been on the Market for more than 28 years,—are manufactured by a conservative concern who do not believe in large advertising campaigns but prefer to put the value into high quality and lower prices. They are FULLY GUARANTEED and will be repaired or replaced gratis if found defective due to Material, Design or Workmanship.



No. 489 (Group 3 Micrometers 1-2-4") \$14.95

YOU SAVE 30 PERCENT		List	KRW Price
No. 489A	1 inch micrometer.....	\$6.75	\$4.75
No. 489B	2 inch micrometer.....	7.50	5.25
No. 489C	4 inch micrometer.....	9.00	6.30
No. 489D	Test gauge for 2 inch micrometer.....		1.00
No. 489E	Test gauge for 4 inch micrometer.....		1.25

Other sizes up to 6 inch at proportionate savings.
Test gauges are not included with micrometers.

"EZY-OUT" Taps

For removing broken studs or cap screws. See Group 2 Page 8.



No. 17 (Set of 3) \$1.25

As illustrated in Group 2, Page 8

No. 20 (Set of six, complete with drills) \$2.85

As illustrated above, "Ezy-Out" extractors back the broken screw out on its own threads. No damage is done to the threads of the hole, no re-tapping or oversize screws are required.—Just drill a hole in the screw, insert the tap, and out it comes. This set handles any size up to one inch studs.

Push Rod Countersinking Tools

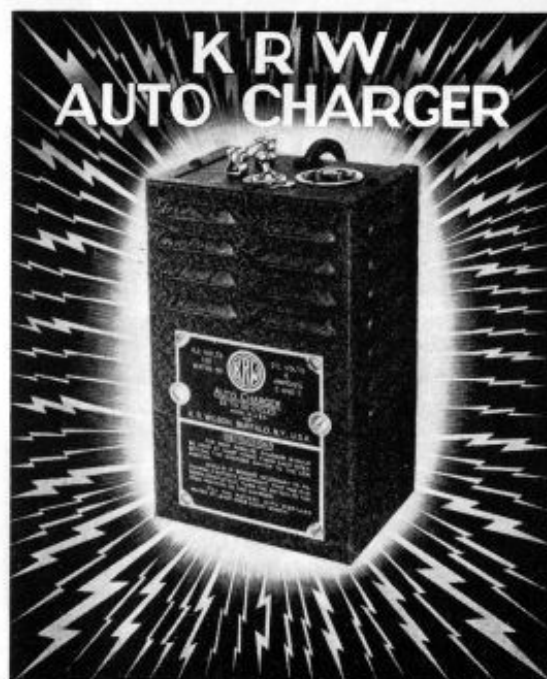


No. A390 PRICE \$2.50

See Page 91
Fig. 145 Jan.-
Feb. 1932
Ford Service
Bulletin



The KRW Push Rod Countersinking Tool is absolutely necessary when servicing 1928-1929 Model A motors. Old style push rods have been discontinued. The new type will jam the camshaft unless counterbored.



See Page 96

KRW "UNIVERSAL" VALVE REFACING MACHINE

Shipping
Weight
130 Pounds

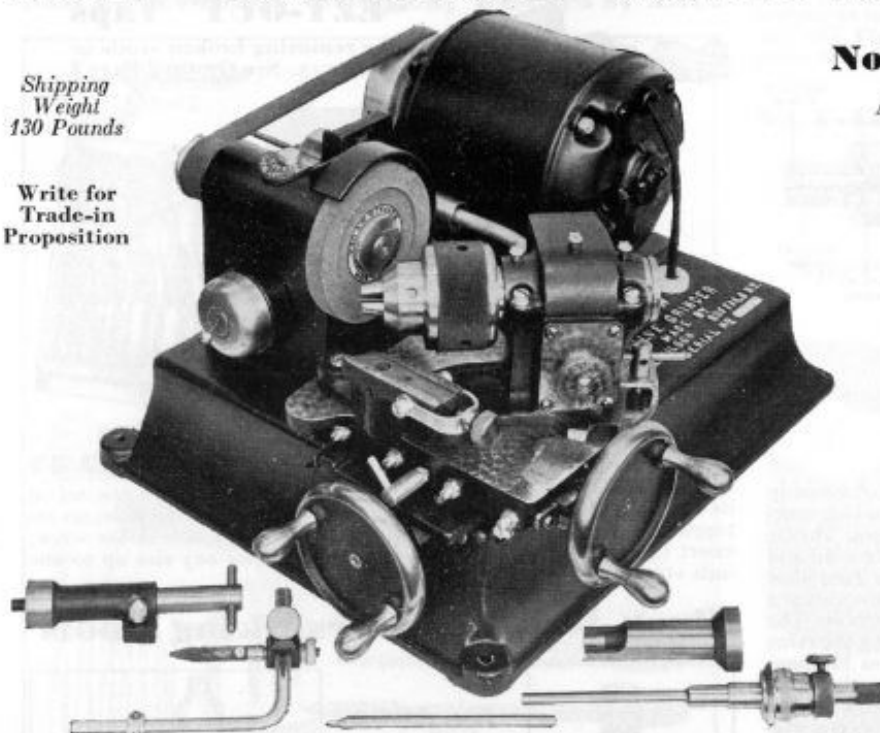
Write for
Trade-in
Proposition

No. 467 ★ Price \$85.00

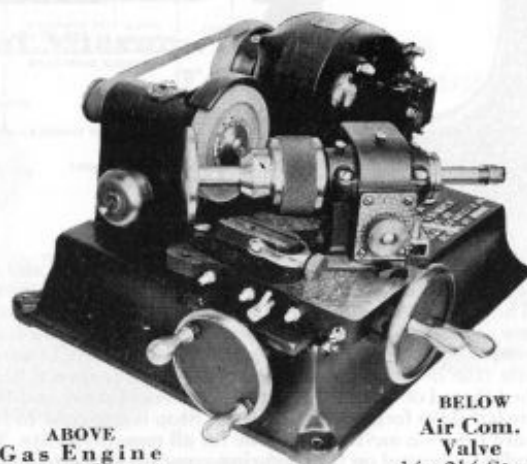
ALL ANGLES, 30 to 60 Deg. Inclusive

3/16 to 5/8ths. Inch Stems

3/4 to 3-1/4 Inch Heads

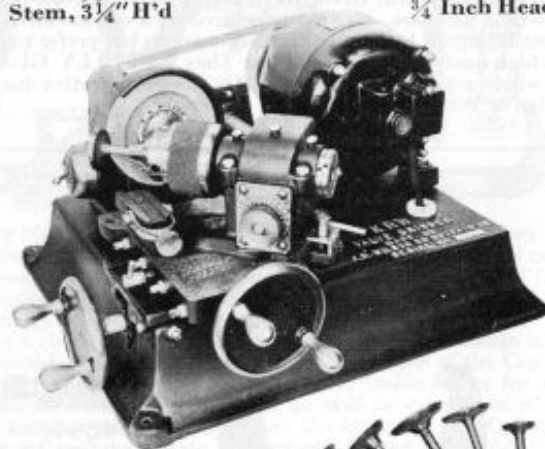


This new KRW "Universal" VALVE REFACING MACHINE has *everything*.—the result of ten years experience building more than 12,000 Valve Refacers. It is carefully built and very accurate. Several exclusive KRW Features put it in a class by itself. Such as—Ball Bearing Wheel Spindle assembly—instantly removable as a unit.—Automatic "take-up" for wear on feed screws.—Adjustable feed screw nuts.—Hand wheels have double handles to secure finer adjustment and greater leverage.—Slides are hand scraped and fitted.—Gibs are hardened, ground and adjustable to take up wear.—Carriage Lock.—Special Jacobs—KRW Chuck, made integral with spindle, guaranteed accurate within .001.—Mottled finish on table and other parts to insure accuracy and an attractive finish.—Diamond Wheel Dresser, Index Finger (for grinding cutters), Index finger locating device, and Micrometer Depth Gauge and Butting-off attachment for Ford Valves are all included. **YOU CAN'T BUY A BETTER OUTFIT.**



ABOVE
Gas Engine
Valve 5/8" x 11
Stem, 3 1/4" H'd

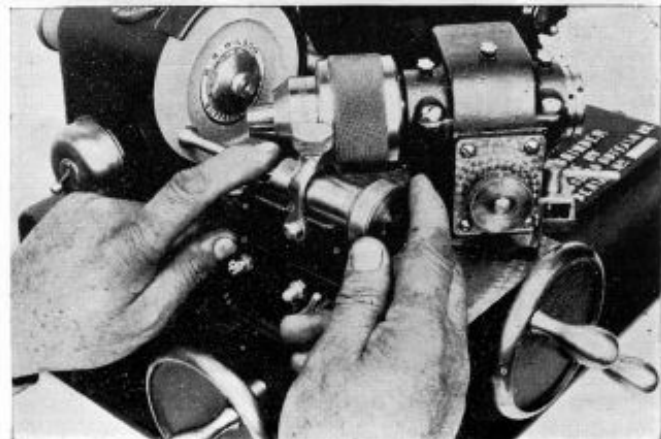
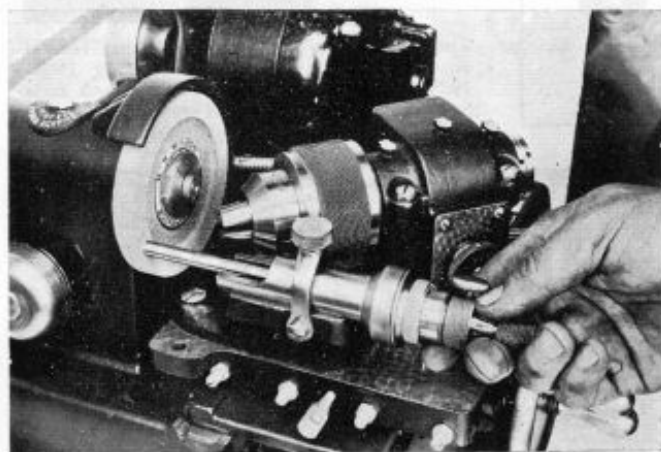
BELOW
Air Com.
Valve
1/4 x 2 1/2 Stem
3/4 Inch Head



HANDLES
All Sizes
3/16 to 5/8 Stems
3/4 to 3 1/4 Heads



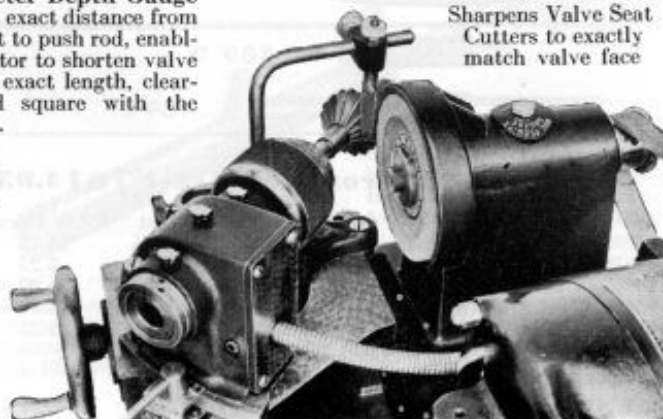
See Page 12 for Grinder
and Reseating Tools



Micrometer Depth Gauge
Measures exact distance from
valve seat to push rod, enabling
operator to shorten valve
stems to exact length, clearance
and square with the
push rod.

Saves
30 to 60
minutes

Sharpens Valve Seat
Cutters to exactly
match valve face



K R W Improved Work Head

Shipping
Weight
12 Lbs.

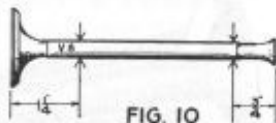
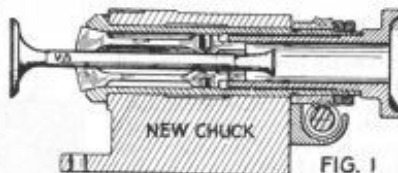
No. 486

\$24.50

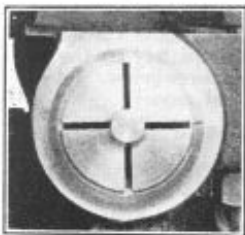


Modernize your present KRW Valve Grinder to handle ALL Ford Valves with this Work Head which comes to you complete as shown, all ready to fasten on your KRW Machine. — Worm Gears, Flexible Shaft, New Style Diamond Holder, Micrometer Depth Gauge and Valve Butting-Off Attachment for V-8 Valves. It is

equipped with an extremely accurate, Drop Forged, Two Piece, Four Jaw, Draw-in-type, Collet Chuck (our own exclusive design) which grips the valve stem in two places, on finished surfaces, —insuring the N'th degree of accuracy and perfect alignment. (See Fig. 1-2-3-10) Collets up to 1/2 inch can be furnished on special order at \$2.00 each. This Head has been used on KRW Machines for the past four years and has proven very satisfactory. Dealers purchasing New Valve Grinders are now demanding "Universal Type" machines which is the reason for the change. The Universal Head is an inch higher therefore cannot be used on older type machines. BE SURE to give serial number of your machine when ordering.



4-Jaw
Collet Chuck



Air Operated Valve Grinder

No. 143

Price \$14.00

Hose and Clamps \$1.50 Extra
Shipping Weight 4 Pounds



Here's a new tool your boys will love
to use—Saves Time!

At last we are able to offer you the simplest and most perfect "Air Operated" Valve Grinder. It uses two cubic feet of

free air per minute. Speed is instantly adjustable from very slow to fast, with a turn of the wing nut at the top of the cylinder. Automatic throttle prevents operation and waste of air until a slight pressure is applied on the valve. It will turn out a much better valve grind job in a fraction of the usual time required by any other method. Unusual smoothness of operation is possible only because it is air operated, and no "shocks" are transmitted to the valves, as with electric driven machines, through trains of gears, cams and levers. It is also powerful enough for the largest tractor valves.

Have Your Old KRW Grinder Rebuilt

KRW Valve Refacers can be rebuilt as good as new at a very small cost, usually averaging from \$12.00 to \$20.00 for rebuilding and refinishing, plus the extra cost of \$24.50 for the new Head. Box machines carefully and ship, transportation prepaid, direct to our factory—K.R. WILSON ARCADE, N. Y. Include all attachments so they may be inspected and put in good condition. On arrival of machine, inspection will be made and you will be advised of exact cost before work is started.

KRW Portable Valve Grinder Stand

No. III

Price \$9.00

Shipping Weight
125 Pounds



Shipped Set-up crated
from our own factory,
Arcade, N. Y.

The KRW Portable Valve Grinder Stand will cut valve grinding operations in half in the average shop by eliminating the lost motion and time required going back and forth from the valve grinder to the car. This stand is so arranged that all the tools necessary for the operation can be carried to the car. A space is also provided for carrying the fender, seat and door covers, while the parts removed from the car, such as cylinder head, gaskets, distributor, nuts, etc., are placed on the upper shelf instead of on the floor or running board of the car, as is usually done by mechanics.

No Other Legitimate Business Offers Greater Profits Than A Real Ford Service Station

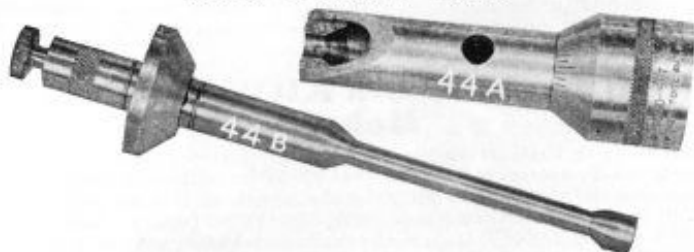
provided, of course that the service is just what the name implies—that it is run as a business and not as a "game"—that the proprietor is interested to see that his customers get the same kind of service he would like to buy if conditions were reversed. Apply the Golden Rule Policy and you cannot help but make Good.

KRW Micrometer Depth Gauge and Valve Butting-Off Attachment

No. V51-V-52

Price \$7.50

For A - B and V8 Valves

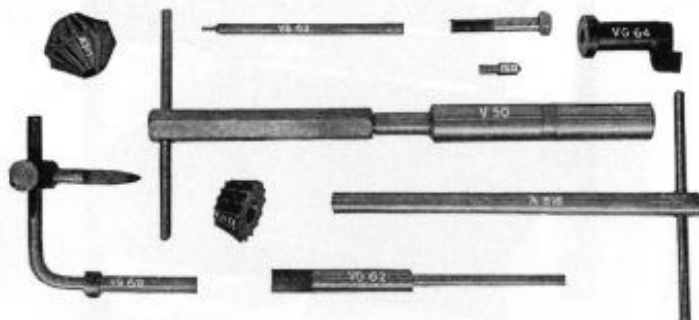


This improved KRW Micrometer Depth Gauge and Valve Butting-Off Attachment will save 30 to 75 minutes on every valve grind job. Fits all KRW Grinders built since 1927. The Micrometer Gauge measures the distance from the Valve Seat to Push Rod, then it is shortened 12 thousandths (or any other amount of clearance desired) and placed in the Butting-Off Fixture on machine, and carriage moved until the end just touches Grinding wheel. Carriage is "locked", tool withdrawn and valve inserted, then ground off the end until Head of valve seats tightly in fixture. It will be Flat, Absolutely Square with the Push Rod and have the proper clearance. All guesswork is eliminated. A perfect job assured every time.

See Page 10 for pictures showing operations

KRW Valve Reseater Tools

THIS group shows the equipment needed to properly reseal valves in A-B and V-8 motors, also attachments for your KRW Valve Grinder so that your mechanics can resharpen valve seat cutters, to exactly match the angle at which the valves are refaced, on the same machine. This greatly reduces the time required for "grinding-in" the valves and insures a perfect fit. Check over this list. You may have some of these tools but you need all of them. Remember the best mechanic in the world cannot turn out a good job with dull cutters and improper equipment. Your profits depend on turning out a perfect job at the least labor cost. Ford and KRW engineers are constantly perfecting equipment to do the jobs better and quicker. Do not use cutters on hardened seats.

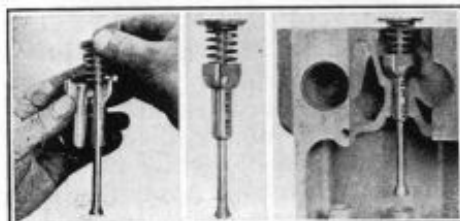


V50	Valve Seat Pilot for V-8	3.25
A316	Valve Seat Pilot for A and B	1.50
A317	45 degree Valve Seat Cutter	2.50
A317B	75 degree Valve Cutter	1.50
VG32	Diamond Wheel Dresser	2.50
VG62	Cutter Grinding Arbor	1.00
VG63	Index Finger Gauge	.25
VG64	New Style Diamond Holder	.50
VG69	Indexing fixture complete	1.00
VG70	4" x 1 1/2" Cup grinding wheel (for new valve)	1.00

KRW Valve Grinding Bushing

No. AB90

Price \$1.00



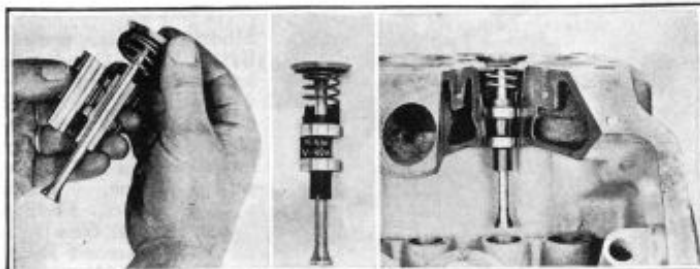
For
A and B
4 CYLINDER
ENGINES

This tool is similar in design and construction to the V-8 tools illustrated above. Each mechanic needs one.

KRW Valve Grinding Bushing

No. V90A

Price \$1.10



The KRW "Hinge Type" Valve Grinding Bushing for V-8 insures accurate alignment of valves being "lapped-in". It is a real labor saver too. It is made of drop forgings very accurately machined to close limits. The body is ground concentric with the valve stem hole. BEWARE of die cast tools being sold for this purpose, as great accuracy is required.

V-8 Valve Guide Knock-Out Tool

No. V60

Price 60 Cents

Saves its cost on the first job through time saved and damage done by makeshift tools such as files, screwdrivers, punches, etc. The main shank is made of brass so it cannot damage either the valve or valve seat. It is correctly shaped and milled to do the job quickly. Every engine mechanic needs one when working on a valve job. Don't be without it.

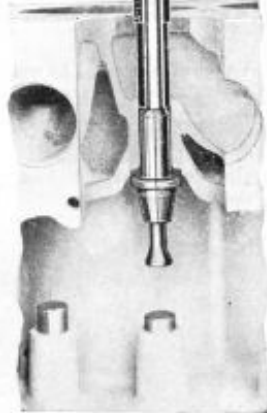


KRW Valve Guide Remover

No. AB113

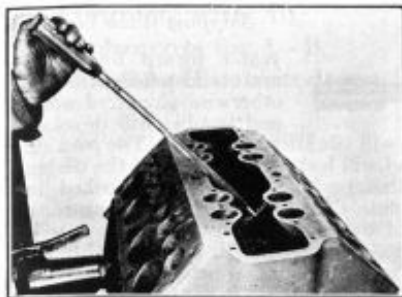
Price 75 Cents

The KRW Valve Guide Remover for A and B has proven superior to any other we have seen. It cannot possibly damage the valve stems or seats, as the under side of the valve head sets squarely on the surface of the driver, as shown in the two operation pictures below. Get one for every mechanic in your shop and save time and money.



Consult us before you purchase any kind of tools or equipment. Costs nothing to get our prices. We can save you money!

KRW "Bar Type" V-8 Valve Lifter

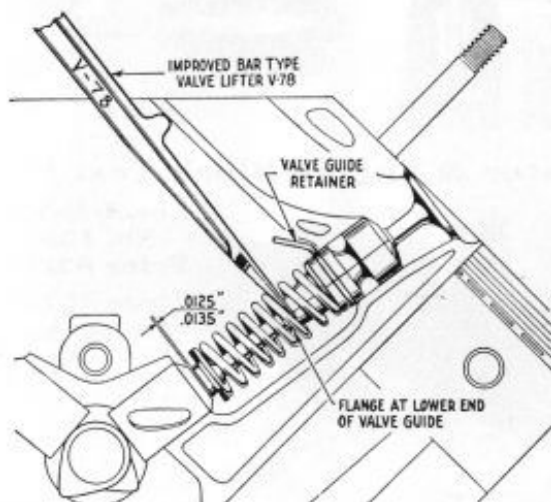


No. V-78
Price \$1.75
Three for \$4.75

The KRW "Bar Type" Valve Lifter has recently been reinforced and improved (as shown in above picture) to handle both types of V-8 Valves, including the latest which is assembled as a unit and equipped with extra heavy

valve springs. It is forged from tough alloy steel, then heat treated to withstand bending and wear. It has great leverage being 22 inches in length. Every Motor Mechanic needs one. It will save them considerable time over any other type. Shipping Wt. 3 pounds

SEE! Page 143 January - February 1934 Ford Service Bulletin.



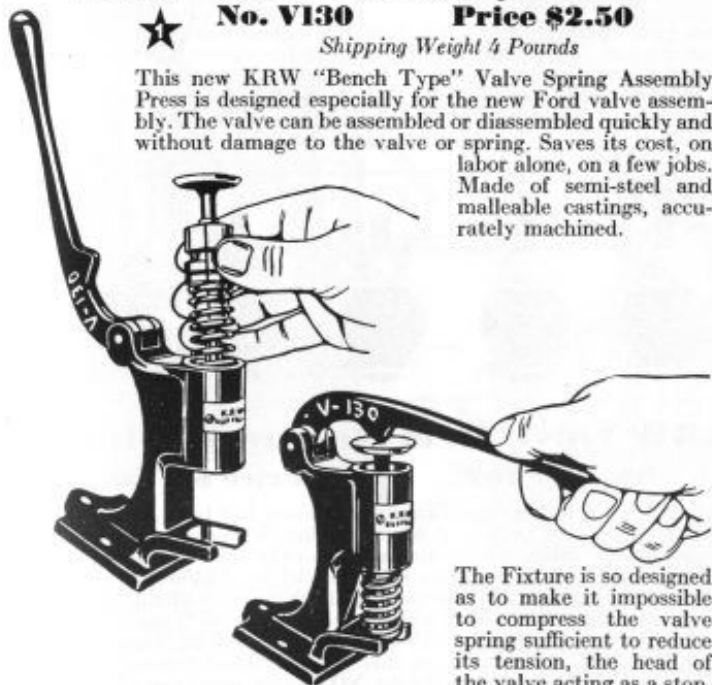
KRW Valve Assembly Press

★ **No. V130** **Price \$2.50**

Shipping Weight 4 Pounds

This new KRW "Bench Type" Valve Spring Assembly Press is designed especially for the new Ford valve assembly. The valve can be assembled or disassembled quickly and without damage to the valve or spring. Saves its cost, on

labor alone, on a few jobs. Made of semi-steel and malleable castings, accurately machined.



The Fixture is so designed as to make it impossible to compress the valve spring sufficient to reduce its tension, the head of the valve acting as a stop.

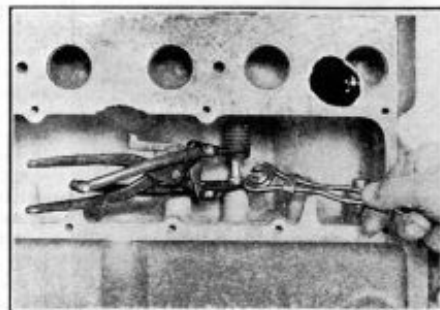
SEE! Page 143 January - February 1934 Ford Service Bulletin for further information.

Valve Spring Lifter and Valve Seat Extractor - Replacer

For Early Model
"A" Cars

No. A322A
No. A322B } **\$1**

This Tool has several advantages as shown by picture. Small in size, powerful in operation. Lips on upper jaw are "warped" to conform to spiral of spring. Both jaws open parallel, avoiding danger of slipping out. Locking device holds spring at any height while valve spring is being removed or replaced. The Valve Seat Extractor and Replacer is an important accessory and saves lots of time as well as "pinched" fingers.



Gladding Valve Setting Gauge

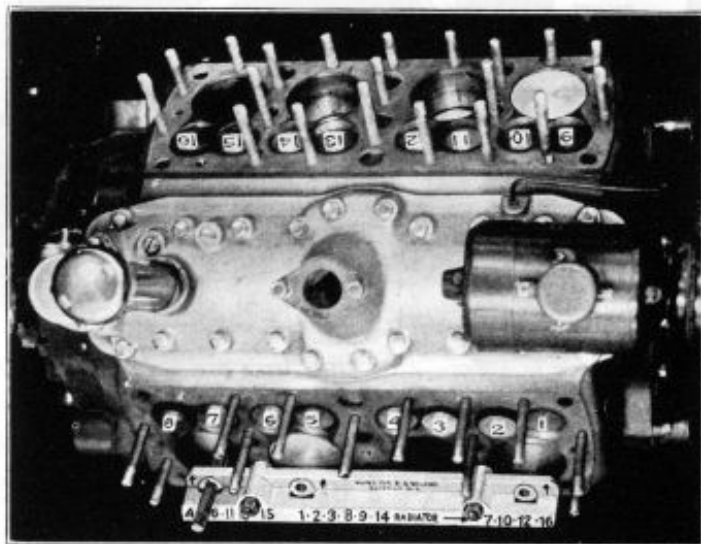
No. V85

Price \$1.50

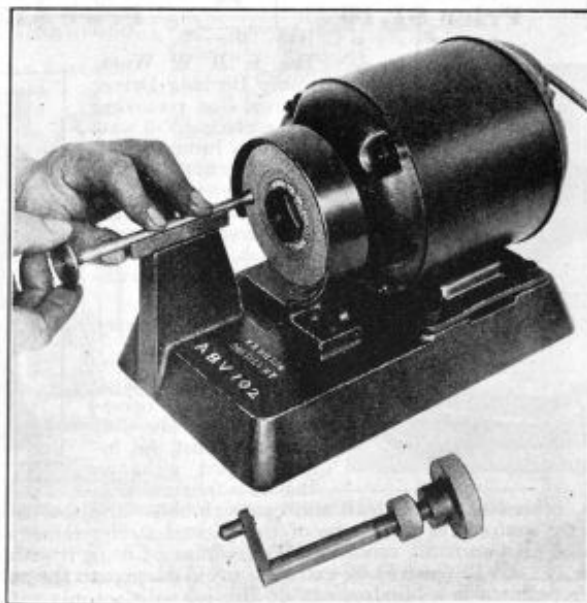
Shipping Weight 3 Pounds

Patented Sept. 13, 1932

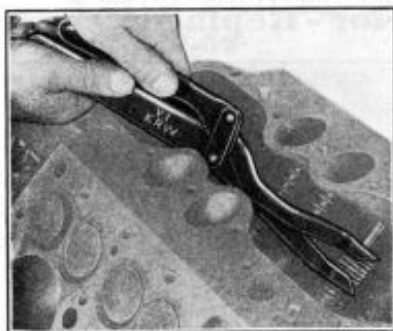
The Gladding Valve Setting Gauge prevents mistakes and saves your mechanics considerable time when placing the cam shaft in the proper position for grinding or spacing the valves on a V-8 motor. Guess work is eliminated. Valves set with this tool are always "in the clear" with the push rods resting on the heel of the cam. Your mechanics need and will appreciate this tool.



KRW Valve Stem Clearance Grinder
SEE Description, prices etc. at bottom of
opposite page



V-8 Valve Spring Compressor



**For
Early V-8 Cars**

**No. V-1
\$1.25**

This Valve Spring Compressor was designed by Ford Engineers especially for the early Model V-8 Engines in which the valve springs had to be compressed (not raised) and taken out before the

valve and valve guide could be removed. It is made of heavy alloy steel stampings, thoroughly heat treated and the jaws hardened to resist wear. You should have at least one of these ready for service on engines of this type.

Valve Guide Carbon Remover

No. V-41 "For V-8" Price \$2.50

"It Pays To Do The Job Right"



The K R W Valve Guide Carbon Remover is another important tool for removing the carbon which accumulates around the valve guide bushings, causing them to stick. Whenever a set of valves is removed for any reason the guides should be reamed free of carbon so that the bushing can be inserted easily without jamming. The Pilot of this tool is accurately ground for a perfect fit in the push rod guide. Every shop will have much need for this tool, to do the job right and in a thorough manner.

Note: For Model A and B Valve guides we supply a pair of wire brushes. No. A-419 at \$1.25.



V-8 Water Pump Tools

★ **Bushing Driver
No. V-13
Price \$1.10**

★ **Felt Retainer
Driver No. V-14
Price \$1.50**



The K R W Water Pump Bushing Driver is used for removing and replacing V-8 water pump bronze bushings. It is made of tool steel, heat treated, hardened and ground to accurate dimensions so that the bushings can be driven in without damage.

No Reaming Necessary

The K R W Felt Retainer Driver shown above is another very necessary tool. The felt packing must be installed just right so that it is free and flex-



ible, otherwise it will leak and cause trouble. The tool is made to exactly conform to the shape of the pressed steel retainer ring. The ground pilot correctly centers it. We recommend using it with cast iron Base No. BV42 (cost \$1.00 extra) to avoid damage to the pulley. Not one repairman in a hundred can do this job satisfactorily without it.

KRW Water Pump Bushing Set

For A and B Cars

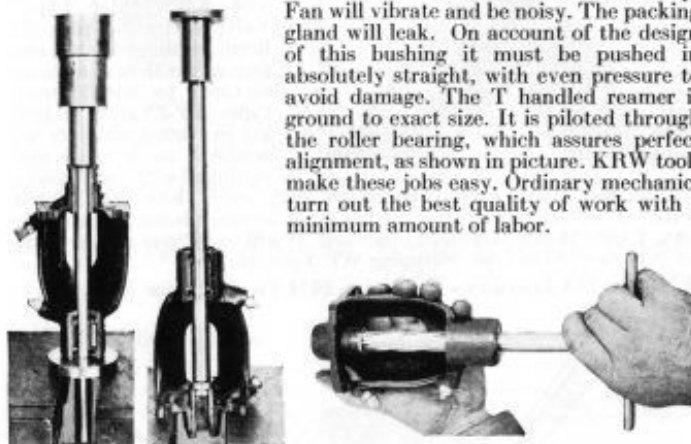
**No. A-347
Price \$5.50**

Shipping Wt. 5 Lbs.



Water pump bushings must be installed correctly, otherwise plenty of noise and trouble will develop.

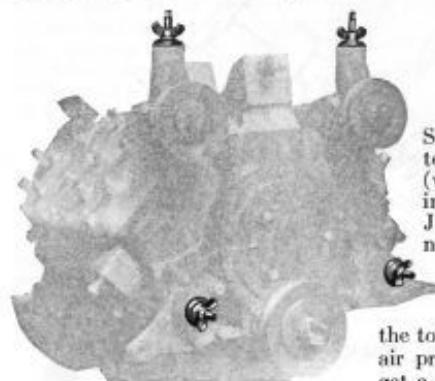
Fan will vibrate and be noisy. The packing gland will leak. On account of the design of this bushing it must be pushed in absolutely straight, with even pressure to avoid damage. The T handled reamer is ground to exact size. It is piloted through the roller bearing, which assures perfect alignment, as shown in picture. KRW tools make these jobs easy. Ordinary mechanics turn out the best quality of work with a minimum amount of labor.



Radiator & Engine Block Test Plugs

**For A-B-V8
No. 139
Price \$2.75**

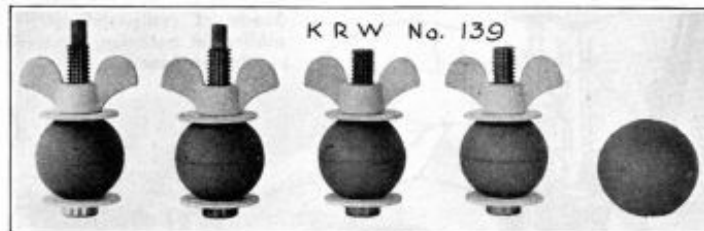
Shipping Wt. 2 Lbs.



Save Time and Money by testing V-8 engine blocks (which are suspected of being leaky) right in the car. Just remove the hose connections, insert the Expanding Rubber Balls then fill the jacket with water thru the top connection. Insert

the top plug and apply 50 pounds air pressure. If it leaks you will get a spray of water that will attract your attention.

Very often cylinder block assemblies are removed from the car, disassembled and returned to the factory at considerable trouble and expense when only a cylinder head nut needed to be tightened against the gasket to stop the leak. A and B blocks are tested in the same manner. The same set of test plugs is used for testing radiators. Full instructions are furnished with each set.



KRW Valve Stem Clearance Grinder

No. ABV 102

Price \$17.50

This new KRW Valve Stem Clearance Grinder has been designed for dealers using other makes of valve refacing machines which are not equipped for grinding off the mushroom ends of the valve stems. This machine is not quite as complete as our Model No. A349 but is sold at a price so low you cannot afford to be without one, considering the time saved and the quality of work which it will do. Special Wagner 1/2 H. P. single phase motor equipped with end thrust ball bearing. Supplied only in 60 cycle, 110 volts. A genuine diamond and wheel truing fixture is also included. Shipping weight 61 lbs. **NOTE:**—A new type "V" block to grind push rods has been perfected since this picture was made, and will be furnished on all orders without extra cost.

See picture on page 13

K R W PISTON HEATER AND PIN INSERTION MACHINE

No. ABV-115

Price \$40.00

Complete with All Attachments for A - B and V-8 as Illustrated

Shipping Weight 90 Pounds

The KRW "Electrically Heated" Piston Pin Machine is one of our greatest contributions to Ford Service. It enables ordinary mechanics to assemble pistons, wrist pins and connecting rods with factory precision. An automatic heat control switch maintains correct temperature. Only one minute is required (after machine is once heated) to heat the piston sufficiently to freely insert the pin without distorting the piston and only a slight pressure is required to push the pilot thru the locking ring in the connecting rod. An adjustable stop against the outside end of the piston boss prevents distorting of the piston out-of-round. The drawing shows how all parts are assembled in perfect alignment, and the connecting rod is "perfectly centered" before being removed from the machine.—eliminating the danger of "offset and bent connecting rods and cocked pistons." The price includes a complete set of accurately made pilots, bushings and locking ring tools, for both 4 and V-8 models. The new V-8 motor is so accurately built that precision equipment is necessary to service it. This machine will quickly pay for itself by the saving of labor over any other method or on a couple of "come backs" due to a poor job. Specify for 110 or 220 volts.



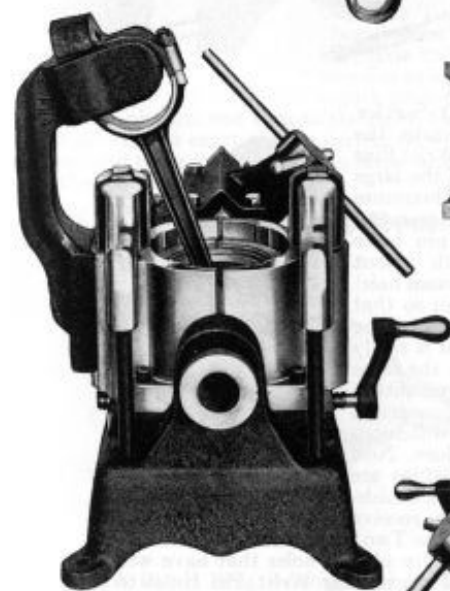
Attachments Included for A - B and V-8



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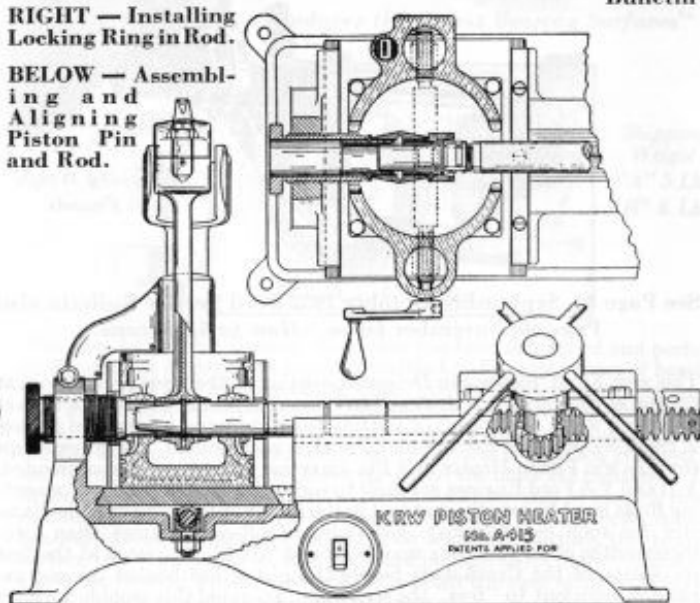
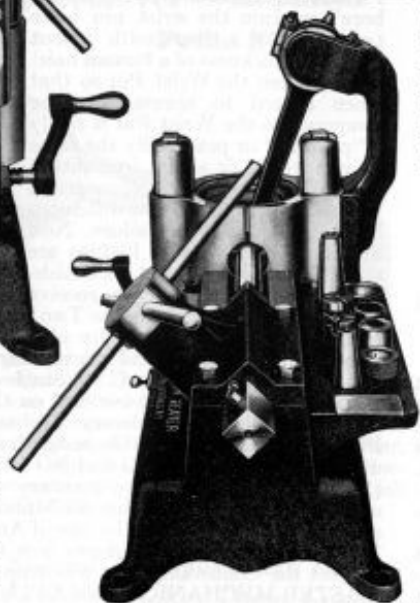
RIGHT — Installing Locking Ring in Rod.

BELOW — Assembling and Aligning Piston Pin and Rod.



ABOVE — V-8 Piston being assembled. Aluminum inserts and Narrow Connecting Rod Guide are used.

RIGHT — A or B Piston being assembled. Tool Rack holds extra parts.

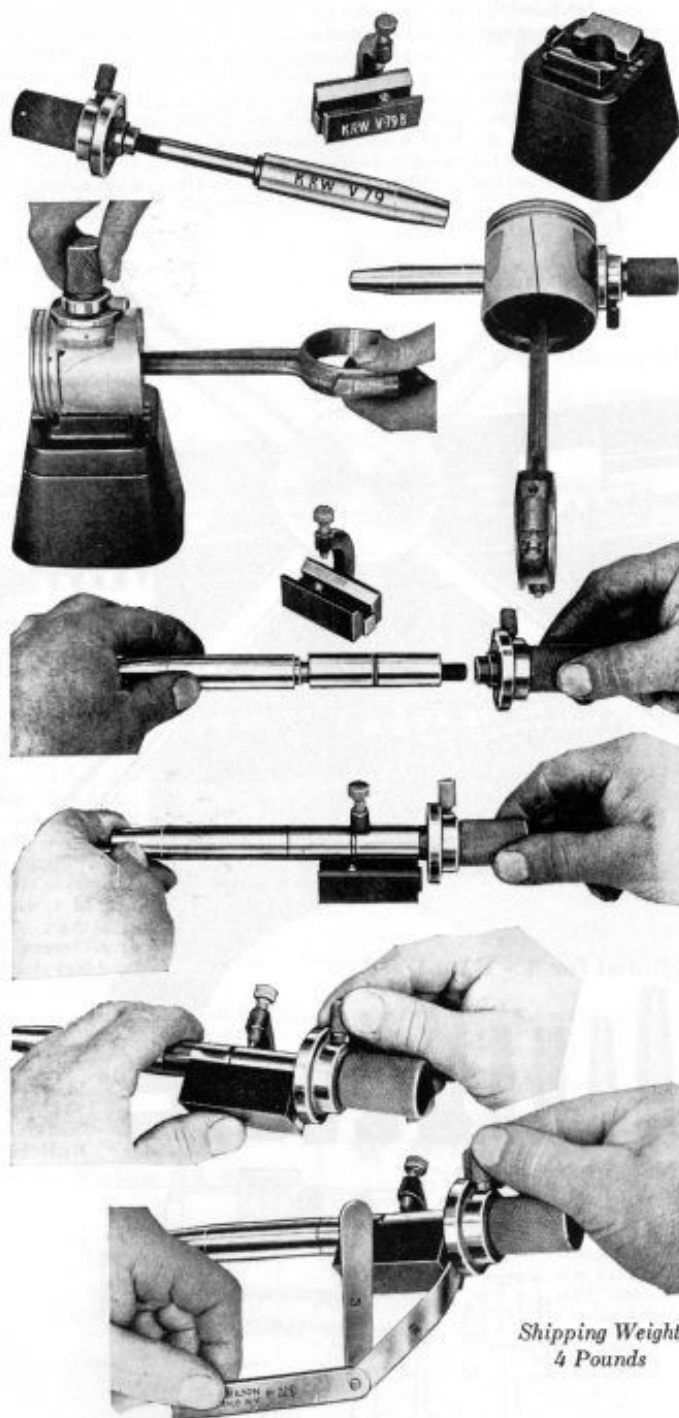


"Improved" Piston Pin Driver

No. AB355 For Four Cylinder Cars \$3.85

★ No. V79 For Eight Cylinder Cars each

"It Centers the Connecting Rod"



See Page 54, September-October 1932 Ford Service Bulletin also Page 66, November Issue.—How to fit pistons.

This new KRW Piston Pin Driver, consisting of the three parts shown at the top of this picture, is designed to be used in connection with a bucket of boiling water as a means of heating the piston and is intended for use in small shops where the volume of work is very limited. For larger shops the Electric Piston Heater and Pin Inserting Machine is recommended. A-B and V-8 Ford Engines are built to such close limits that the Connecting Rods must be exactly centered in the Piston, (using the outside diameter for such calculations)—otherwise, if off-center more than two-thousandths of an inch they may bend and "cock" the piston at the first revolution of the Crankshaft before the piston has heated up and expanded sufficient to "free" the wrist pin. To avoid this trouble we have

designed a Piston Pin tool with an adjustable collar or face plate to be used as a "stop" when it contacts the finished surface on the body of the piston. To operate:—First, check the piston pin holes with the Piston Plug Gauge, No. BV-87, to make sure you will have the correct "shrink fit" when the job is completed. Then place the wrist pin on the Arbor, as shown in the two center pictures, and set the collar by means of the "special gauge," which utilizes the groove in the wrist pin for its location. For oversize pistons, place the blade of a Feeler Gauge between the collar and end of the fixture as illustrated, equal to just one half the amount of oversize.

Example:—If piston is ten thousandths oversize, use a five thousandths "feeler." This tool is precision made for a job that must be done RIGHT and is easily worth double our price.

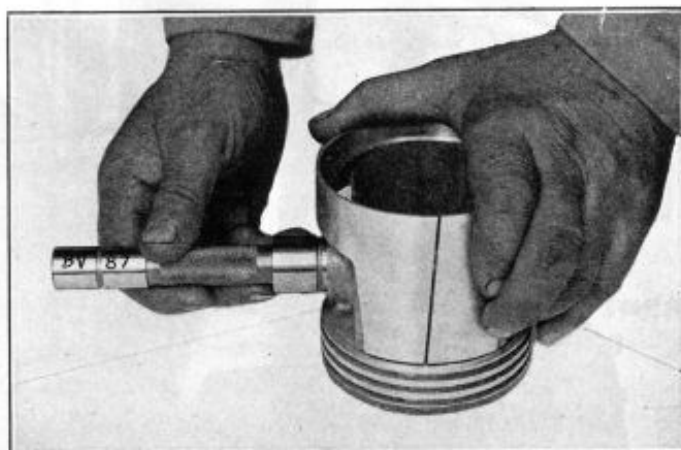
Two separate outfits are required for 4's and V-8's.

A,B,V-8Piston "Go-No-Go" Plug Gauge

No. BV87



Price \$7.25



SEE!

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Service Bulletin
Before
You Start to Read
this Article

After reading the FORD Service Bulletin you will appreciate the importance of fitting Ford Wrist Pins accurately. On account of the large amount of expansion of Aluminum Pistons it is necessary to "diamond bore" or ream the wrist pin holes two-tenths of a thousandth (about 1/12 the thickness of a human hair) smaller than the Wrist Pin so that when heated to normal working temperature the Wrist Pin is really a "push fit" or practically the same as you would fit a cast iron piston when cold. A tenth of a thousandth variation either way is the difference between a success or failure. New Standard and Oversize Pistons are already "diamond bored," burnished and tested when you receive them. On repair work only the Two Thousandths Oversize Plug Gauge is required for installing oversize pins in holes that have worn loose and sloppy. For Reaming and Burnishing Wrist Pin Holes to these close limits we recommend the U.S. "Single Bladed" Expansion Reamer and Burnisher (illustrated above and on the next page) as being the only type that will enable ordinary Mechanics to obtain these results. This Plug Gauge is made double ended for 4 and 8 Cylinder Pistons. The difference between the GO and NO GO Diameters is but one-tenth of a thousandth. Such extreme accuracy makes it necessary to hold the manufacture of them within 25 Millionths of an inch variation. They are made especially for us by one of America's Foremost Gauge Makers. The picture on the right shows how to test the fit of a Wrist Pin; if Correct the Connecting Rod will drop slowly by its own weight. BE A MASTER MECHANIC—USE A PLUG GAUGE and GET RESULTS.

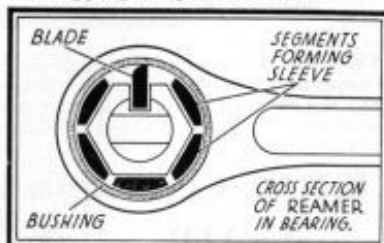


U S Expansion Reamer — Burnisher

No. V75 ★
For "V-8"
\$13.75

AB396
For "Four"
\$13.75

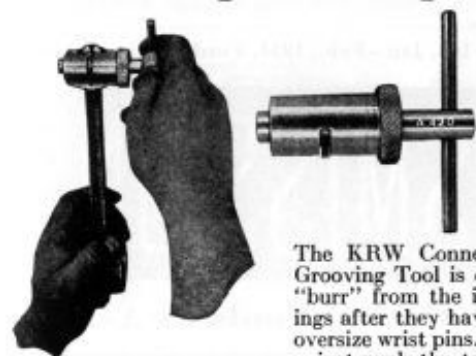
Shipping Weight 4 Pounds



The U. S. Reamer and Burnisher is by far the most highly perfected and accurate tool of its kind on the market. The drawing shows how the segments

expanded to fit the bearing to be reamed, then the single blade "Stellite faced" cutter can easily be adjusted to cut any desired micrometer measurement—within a range of one-thirty second of an inch. It not only removes the metal but polish-burnishes the bearing to a perfect working fit. It is simple to operate and easily understood by ordinary mechanics. This is the only reamer we know of that can be so accurately adjusted as to obtain the results required (as explained in above article on Plug Gauges.) One-third turn of adjusting nut increases size one-thousandth of an inch. Most aeroplane and motor manufacturers use it. It costs more, but never wears out, as blades can be replaced as well as re-sharpened.

Connecting Rod Ring Groove Tool



No. A420
\$1.75

For A and B Only

The KRW Connecting Rod Lock Ring Grooving Tool is designed to remove the "burr" from the inner ends of the bushings after they have been reamed for .002 oversize wrist pins. The operation is simple

—just push the tool into the bushing, as shown in picture, and turn to the right. One complete turn and the job is done—cut to exact size—a perfect fit with the locking ring. Prevents clicks and some so-called piston slaps which might be due to looseness at this point.

KRW Piston Ring Remover — Replacer

No. A313

Price \$1.00



The KRW Piston Ring Remover and Replacer was designed especially for use with Aluminum Alloy Pistons. The piston ring is evenly expanded without distortion and can be lifted clear of the piston without damaging the ring grooves or the smooth, accurate surfaces of the piston. Every "nick" means a high spot to cause friction and wear. Many Repairmen still use Corset stays, Hack saw blades, Files, Screwdrivers etc. because they do not realize the importance of doing the job RIGHT. Order one for each Motor Man.

Good Mechanics Have Special Tools for Every Important Operation. That's What Makes Them Good.

KRW Piston Ring Filing Gauge

No. V109



Price \$2.75



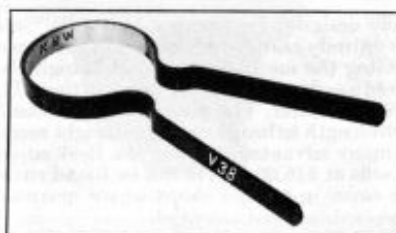
This new KRW Piston Ring Filing Gauge accommodates $\frac{3}{32}$ — $\frac{1}{8}$ — $\frac{5}{32}$ widths. It is made of semi-steel, accurately machined, then case hardened to prevent wear. We believe it is the handiest piston ring filing gauge made. Shipping Weight 6 Pounds.

KRW "Improved" Piston Ring Squeezer

"It's Ground to Fit the Piston"

AB38 or V38

Price 85 Cents



This new KRW V-8 Piston Ring Squeezer prevents distortion of the piston from uneven pressure. It is made of high grade spring steel, heat treated and tempered. The inside is accurately ground only a few thousandths larger than the piston. Your mechanic

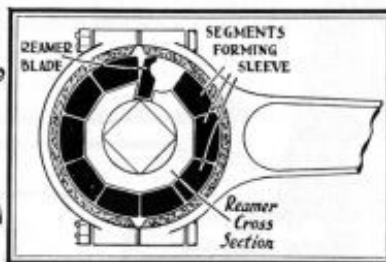
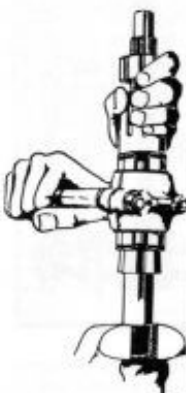
will appreciate this tool as the finest they have ever seen. Made in two sizes, A and B or V-8.

Connecting Rod Reamer-Burnisher

No. A-358 1½ for "A" \$16.00

No. B-69 1⅞ for "B" \$16.00

"Produces the Finest Bearing Surfaces"



Shipping Weight
"A" 5 Lbs.
"B" 6 Lbs.

This new Adjustable Reamer-Burnisher has been developed and perfected to turn out better work than is possible by the most expert of bearing scrapers—and in a fraction of the time. TO USE: Micrometer the crank pin, then adjust the reamer segments to that measurement, after removing a few shims or filing off the connecting rod cap an amount approximating the amount of undersize. The connecting rod is then clamped on the "sleeve of segments" (as illustrated) and the bolts are tightened. The single reamer blade is gradually adjusted until shavings of bearing metal resembling tin foil commence to fall out—resulting in a perfectly smooth bearing—straight from end to end. The segments burnish the bearing surface to a high polish so that there are no high spots to wear down and allow the bearing to become loose, as is often the case after hand scraping. Connecting rod alignment is unchanged.

"A" Connecting Rod Reamer

No. A338

Price \$5.50

Shipping Weight 5 Pounds



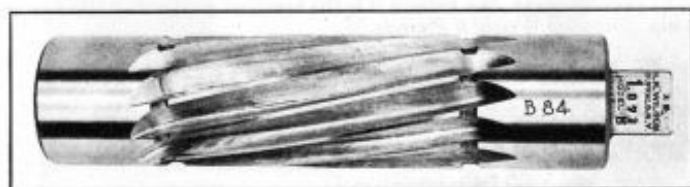
This Reamer has been especially designed for reaming Model "A" connecting rods. Hand scraping is entirely eliminated, except in rare cases, on the filletted edge, thus enabling the mechanic to secure a high-class job in a fraction of the time ordinarily required for hand fitting. This Reamer is spiral fluted to prevent chatter, and has a pilot of sufficient length to start the Reamer straight and is only .004ths smaller than the reamer, thus assuring that the bearing will be reamed at right angles. This Reamer of course does not offer as many advantages as our No. A358 Reamer-Burnisher and it costs only one-third as

much. Smaller shops where maximum speed and minimum costs are not essential will find this Reamer entirely satisfactory and a big time saver.

"B" Connecting Rod Reamer

No. B84

Price \$6.75



This Reamer has been especially designed for reaming Model "B" connecting rods. Hand scraping is entirely eliminated, except in rare cases, on the filletted edge, thus enabling the mechanic to secure a high class job in a fraction of the time ordinarily required for hand fitting. This Reamer is spiral fluted to prevent chatter. The pilot is .004ths smaller than the Reamer and of sufficient length to insure reaming at right angles. This Reamer does not offer as many advantages as our No. B-69 adjustable Reamer-Burnisher which sells at \$16.00, but it will be found entirely satisfactory and a big time saver in smaller shops where maximum speed and minimum production costs are not essential.

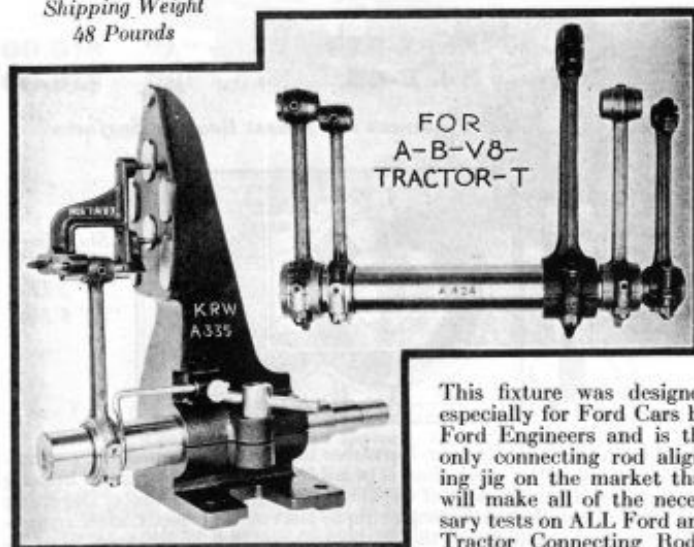
KRW Connecting Rod Jig

No. ABV335



Price \$12.75

Shipping Weight
48 Pounds



FOR
A-B-V-8-
TRACTOR-T

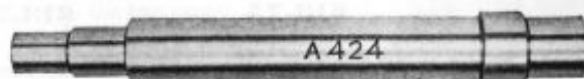
This fixture was designed especially for Ford Cars by Ford Engineers and is the only connecting rod aligning jig on the market that will make all of the necessary tests on ALL Ford and Tractor Connecting Rods, such as "twisted, bent or

offset rods." It is especially valuable for checking Piston and Rod assemblies of Model A-B and V-8 Motors using the "shrunk-in" type of wrist pins. The crank end of the rod must be located exactly in the center of the cylinder. If more than two-thousandths off center, the Piston will be cocked, causing uneven wear on the Piston Rings and oil pumping. These fixtures often pay for themselves on one job, by preventing the losses of labor and material on one "come back."

Modernize Your KRW Fixture

No. ABV424

Price \$5.25



This New Arbor is all you need to Modernize any No. A-355 KRW Connecting Rod Alignment Fixture built during the past eight years. See picture in opposite column for more information.

Shipping Weight 16 Pounds

KRW Crankpin Bearing Pliers

No. V131



Price \$2.00

Shipping Weight 2 Pounds

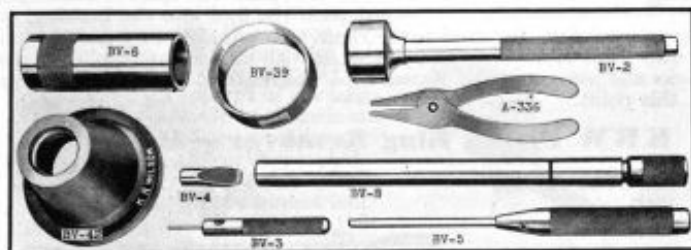


This new KRW Tool has been especially designed for testing Crankpin bearing installation after the connecting rod caps are tightened in place. The tool grasps the flange of the Crankpin bearing insert and permits them to be turned in the rods, permitting a "feel" of the clearances. Test bearings with this tool and you will prevent many come-back jobs. The tool is made from drop forgings, accurately machined and heat treated.

Further details Page 146, Jan.-Feb., 1934, Ford Service Bulletin.

TRANSMISSIONS

KRW Transmission Tools for A-B-V-8



Group 12

\$9.50

If Entire Group is Ordered at One Time

No. BV2	Driver to assemble Transmission	\$ 2.00
No. BV-3	Tool to assemble Spring Plunger	.65
No. BV-4	Pilot to assemble Plunger-Shifter	.65
No. BV-5	Pilot to align Trans. Idlers, etc.	.95
No. BV-6	Driver to assb. Splined Bronze Bushing	1.25
No. BV-8	Fixture to assb. Bearings in Trans.	2.50
★ No. BV-39	"Synchro" Mesh Assembly Ring	1.25
No. BV-42	Base for holding Trans. Shafts, Pumps	1.00
No. A-336	Transmission Lock Ring Extractor	.40

\$10.65

The KRW Tools listed and illustrated above are especially designed for servicing Ford A-B-V-8 Transmissions. Altho some of them are not absolutely necessary, the quality of work and time saved will prove a good investment. They are high grade, accurately made tools—fully appreciated by mechanics who want to turn out quality work.

See Page 2 for Transmission Stands

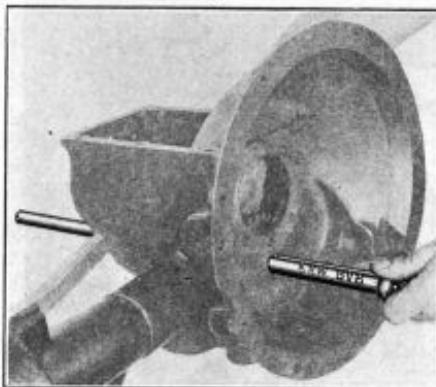
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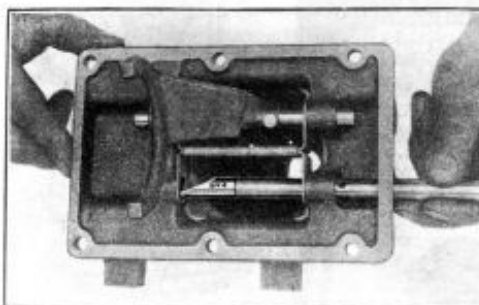
The KRW Rawhide-faced Driver (No. BV2) is especially designed for assembling transmissions. It prevents damage to the transmission shaft while being driven in place. It may be used for dozens of other jobs where care should be used. Please note we recommend the use of Rawhide Mallets.

See page 60

The KRW Fixture for assembling bearings in transmission gear set (No. B-V8) is exactly like those used on the "line" at the factory where the transmissions are manufactured. It consists of a drop forged, tool steel arbor properly hardened, and ground to accurate sizes. It aligns the countershaft and bearings perfectly so that the shaft may be easily inserted.



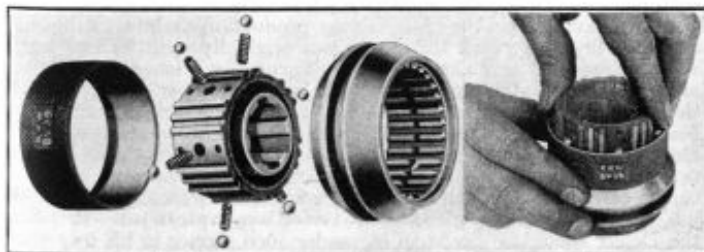
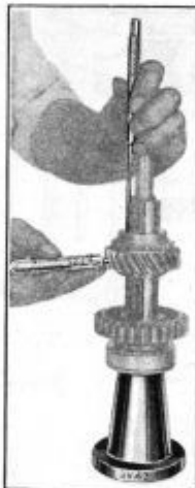
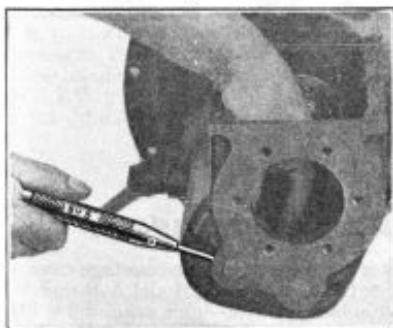
Picture shows Transmission on K R W All-Position Motor Stand. See Page 2



The K R W Pilot for assembling spring plungers and transmission shifter shafts (No. BV4) will be found very serviceable and saves considerable time and annoyance on this operation. It is made of tool steel, hardened and ground all over.

On the right — The K R W Tool (No. BV3) to assemble the spring plunger and locking ring on the transmission shaft. It is a well made tool accurately ground to size.

Below — The K R W Pilot (No. BV5) to align transmission idler gear shafts.



The K R W Synchro Mesh Assembly Ring (No. BV39) is very valuable. The picture shows better than words can explain how difficult it would be to assemble the springs and balls without a fixture of this kind. It is made of steel tubing, pack hardened and ground to size.



The KRW Transmission Shaft Bushing and Bearing Driver (No. B-V6) does two important operations quickly and easily. The splined bronze bushing must be driven in place very carefully to avoid damage by upsetting the end of it, otherwise it will not properly fit its bearing. This same tool also installs the ball bearing on the opposite end of the shaft. Your past experience with operations of this kind should convince you that this tool is needed.

We recommend the use of the cast iron, brass lined base (No. BV42) in connection with these and several other operations for which it is designed—to save you time and prevent damage to transmission parts.

See Page 14. Base is also used with Water Pump Tools.

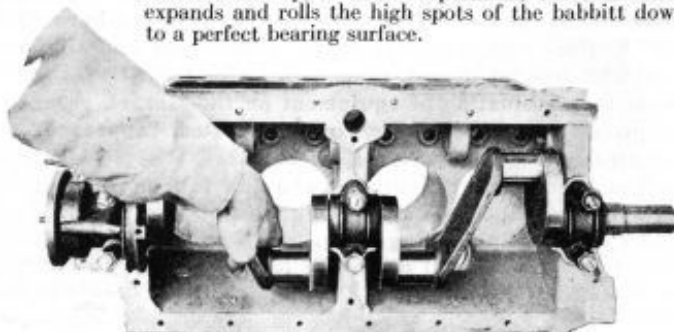


The KRW Locking Ring Pliers (No. A-336) are very necessary for removing or replacing locking rings on transmission and clutch shafts, to avoid damage. They are specially designed with square end points for spreading the ring. Every dealer needs them.

ENGINE REBUILDING EQUIPMENT

Crankshafts Can be Turned with One Hand

By following the K R W process of align-boring and reaming the main bearings one-thousandths larger, the crankshaft can easily be turned with one hand, (when the motor is first assembled—cold). After the motor heats up, in actual operation, the crankshaft expands and rolls the high spots of the babbitt down to a perfect bearing surface.



The Complete KRW Combination Machine

Group I

Price \$285.00

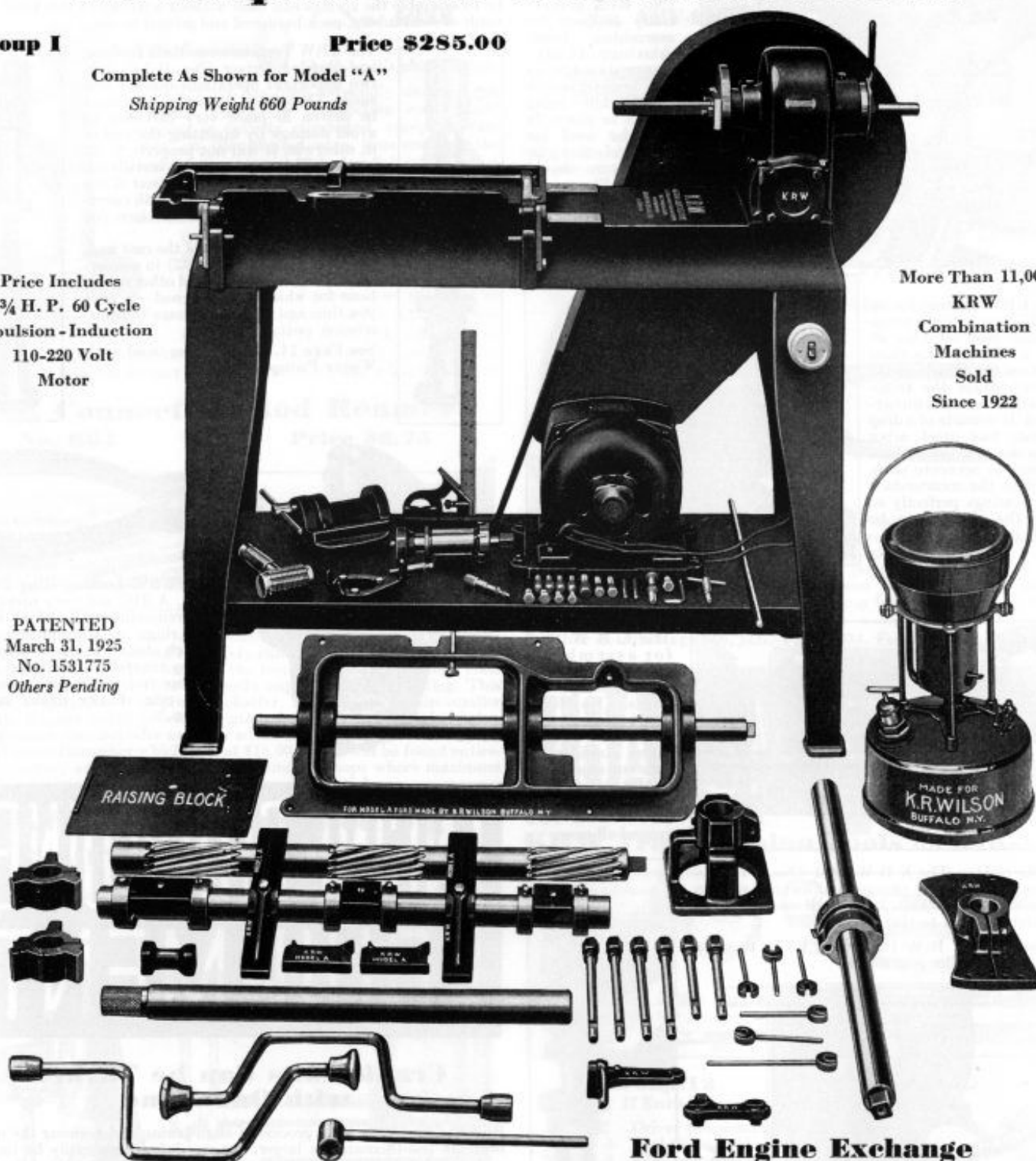
Complete As Shown for Model "A"

Shipping Weight 660 Pounds

Price Includes
a $\frac{3}{4}$ H. P. 60 Cycle
Repulsion - Induction
110-220 Volt
Motor

More Than 11,000
KRW
Combination
Machines
Sold
Since 1922

PATENTED
March 31, 1925
No. 1531775
Others Pending



Ford Engine Exchange

The KRW Combination Machine and group of equipment shown above enables mechanics to remanufacture Ford Model "A" Engines with a greater degree of accuracy and alignment—at 50% less labor cost, than with any other Service Equipment or combination of equipment on the market, regardless of price. The Ford Motor Company tested, "approved" and adopted it as Standard for Ford Service NINE YEARS AGO. It has been further improved and the following additional equipment included—Belt Guard, Main Bearing Peining tool and Clamp, Main Bearing Gauge and Raising Block. Attachments to handle Model B and V-8 motors are shown on Pages 23 and 26. Model "T" Attachments are also available at Bargain Prices.

Ford Dealers in the United States have an unusual advantage over all competition, in being able to offer their customers Model A-B and V-8 Factory Rebuilt Motors on an Exchange Basis,—at a cost under fifty dollars. This plan enables them to give "one day" service and send the customer on his way rejoicing with a job exactly as good as new, actually remanufactured on the same factory production tools, over the same assembly lines on which the motor was originally built. Some Crankshaft, Cam Shafts, and Connecting Rods are reconditioned. Crankshafts are reground to a standard undersize, to make them perfect. Everything else, such as pistons, rings, valves, push rods, valve spring, pump gears, bearings, gaskets, etc., is new. Even hard Valve Seats are installed in blocks previously made without them. This plan has knocked transportation costs into a "cocked hat" and gives the customer the use of his car. In cases of trucks, the time saved is worth more than the cost of the job. Of course, some engines do not need a complete job—therefore, the Dealer should be prepared to render such service in his own shop.

Rough Boring Rebabbited Main Bearings with Assembled Caps

The KRW Process of Align boring the rough babbitted Main Bearings and Main Bearing Caps simultaneously follows identically the same methods used in the Ford Factory. A 3½ minute operation that saves hours of hand labor. It insures accurate alignment and perfect Cam Gear centers.

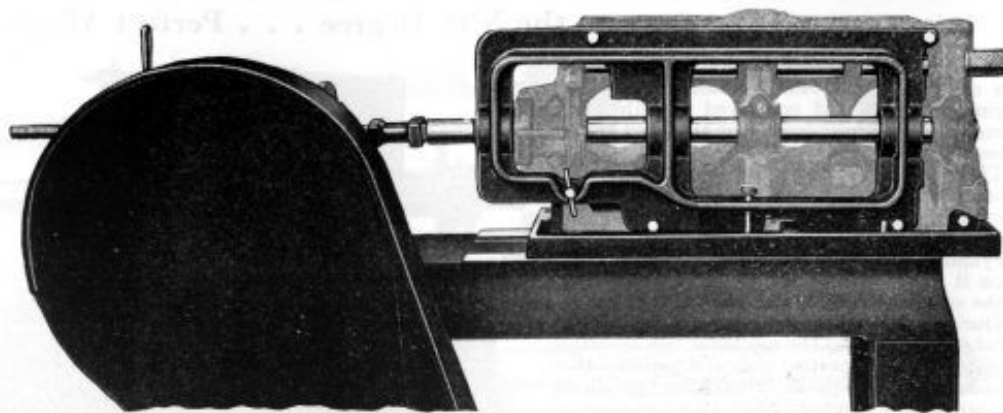
Rebabbitt Every Motor Block

By the time Ford engines need overhauling the main bearings have become impregnated with grit and metal particles worn off the cylinders, piston rings, timing gears, etc., which combined with dirty oil forms an abrasive surface. Because of this condition bearings just "tightened up," as in ordinary practice, quickly wear loose. The crankshaft is also thrown out of alignment with the transmission and timing gears are forced to mesh closer, causing excessive noise.

By rebabbiting main bearings these troubles are avoided and perfect alignment is assured. New bearings are cast with the KRW Rebabbiting Fixture which "chills" every bearing alike, insuring uniformity of texture and better wearing quality. The bearings are then "peined" tight to take up the shrinkage.

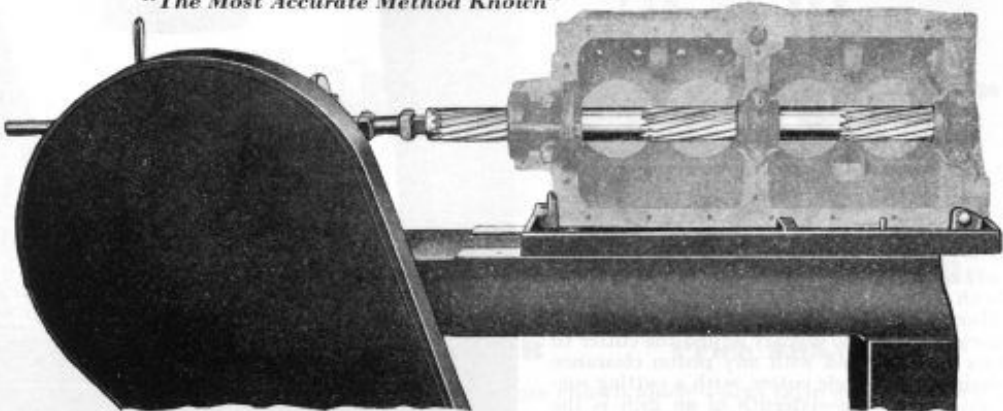
The KRW Combination Machine enables the Mechanic to do this operation correctly in a fraction of the time required by any other method. The KRW Babbitt Boring Fixture is very rigid and is bolted to the machined faces of the motor block, which further increases its rigidity. The fixture is entirely self-contained. It connects to the Combination Machine by means of a universal joint. The rebabbitted bearings and rough main bearing caps are bored out simultaneously—just large enough to receive the pilots of the main bearing reamer. This leaves six-thousandths of the bearing metal to be align-reamed in the finishing operation. The pilots of the reamer automatically align the caps while they are being bolted down for the final reaming operation. This prevents any possible shifting of the bearing cap.

Align-Reamed bearings are superior in every way to the best job that can be turned out by any other known process. This statement is best proven by the fact that 98% of all American Automobile manufacturers use it. Bearings can be accurately fitted by hand scraping but this requires an expert with years of experience, and takes ten to twenty-five times as long to complete the job. Even then, the bearings are not always in alignment, due to the fact they are scraped to fit the shaft. The weight of the hands or the "spring" in the shaft will throw it out. By following the KRW process and using the equipment recommended, bearings can be rebabbitted and a crankshaft perfectly fitted in less than one hour.



Align Reaming the Crankshaft Bearings

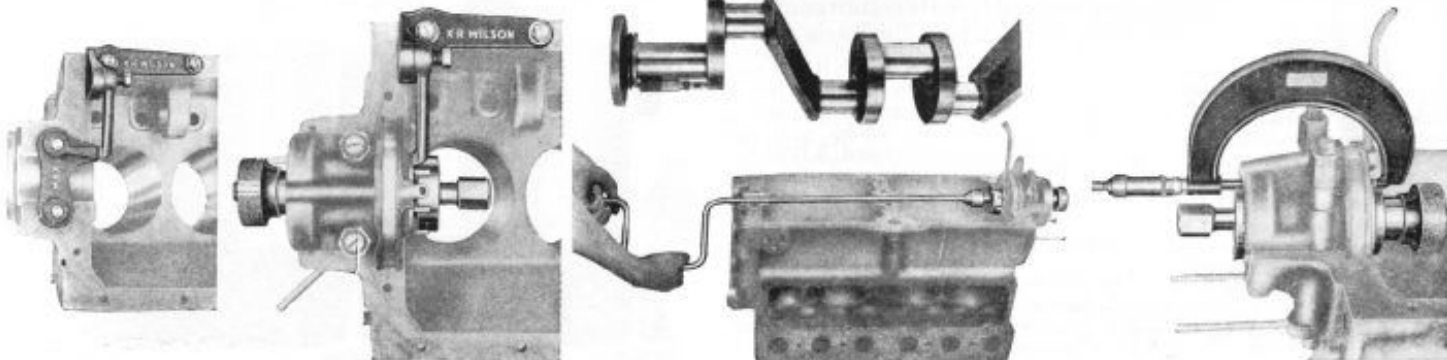
"The Most Accurate Method Known"



Importance of Rear Main Bearing

In Ford Factory Production all machining operations on the cylinder block are first located from the "Reamed" rear main bearing bolt hole (which is on the opposite side from the valves). Therefore all re-manufacturing operations must likewise start from this point, the reason being that the relative position of the crankpins on the crankshaft and the cylinders are held to such close limits. The connecting rod clearance is but .002 to .004ths. Therefore the rear main bearing, which controls end play of the crankshaft, **MUST BE POSITIONED ABSOLUTELY ACCURATE**, otherwise every connecting rod will be thrown out of alignment.

The KRW Rear Main Bearing Gauge, shown in the pictures below, makes this operation easy and accurate. The gauge is placed in position as shown in first picture with the movable arm just contacting the locator. The gauge is securely fastened to the block and the locator removed. The KRW facer and fillett cutter and rear main bearing cap is placed in position and the inner end "shaved off" to correspond with the gauge. From this point all measurements are obtained. A new crankshaft measures exactly three inches between flanges on this bearing; worn crankshafts slightly more. An inside micrometer or telescope Gauge illustrated on page 8 should be used to determine correct amount, as shown in picture. This measurement is transferred to the outside micrometer, as shown in the last picture. The bearing should be cut exactly .004ths shorter—for clearance. These pictures illustrate the exact procedure of facing-off the ends of the Rear Main (thrust) Bearing to correctly position the crankshaft.

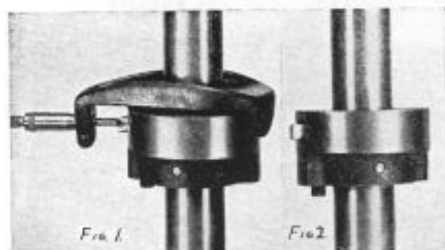


Reboring Cylinders on the KRW Combination Machine

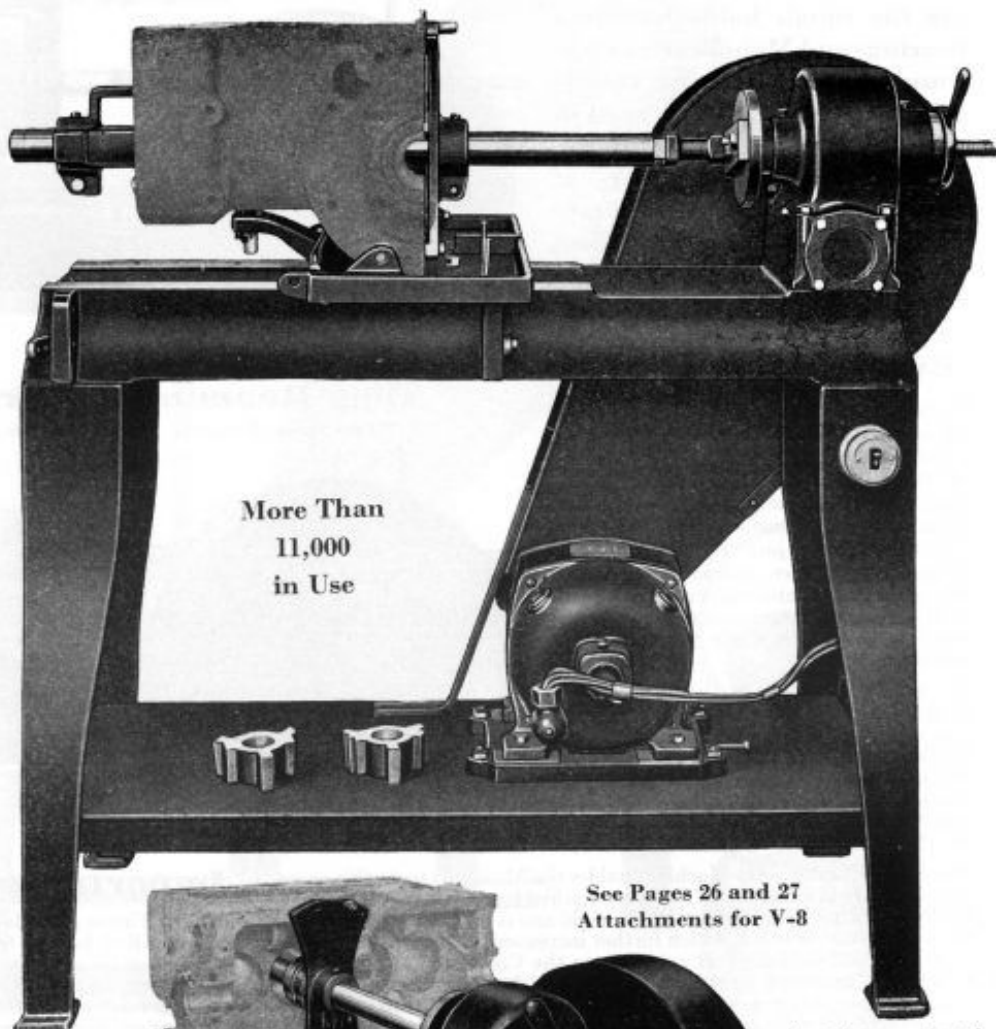
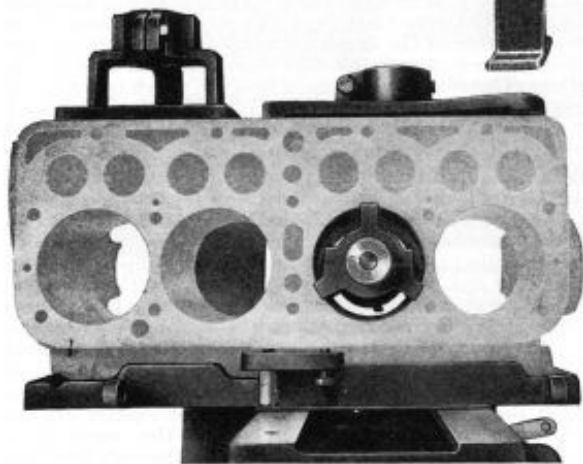
"Accuracy to the N'th Degree . . . Perfect Alignment Assured"

The KRW Cylinder Reboring Machine is in a class by itself. Nine years ago Ford Engineers tested and compared it with other makes. It was adapted as the standard equipment for Ford Service Stations.

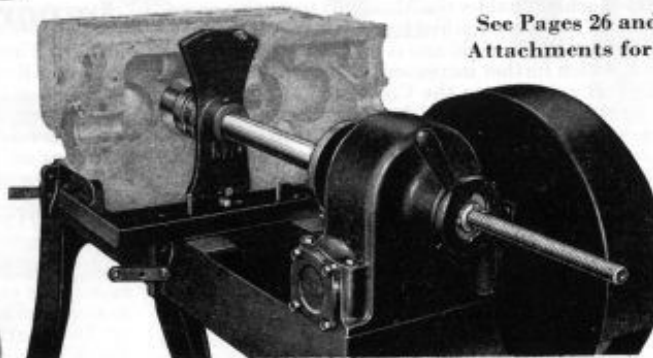
This machine is unequalled for accuracy, ease of set-up and low labor cost for reboring Ford cylinder blocks. It requires an average time of 13 1/4 minutes to set-up to rebores each cylinder and start the machine. From then on it requires no attention; when it reaches the end of the cylinder it stops automatically. During the time the cylinder is being rebored (about 8 minutes) the mechanic can assemble pistons and connecting rods and various other necessary operations. Therefore the direct labor cost for reboring all four cylinders is but 7 to 10 minutes.



The cutters are instantly adjustable to rebores any oversize. The same boring bar is used for both "A" and "T" cylinders. The special Micrometer shown in Fig. 1 enables any ordinary mechanic to quickly adjust the cutter to any oversize, and with any piston clearance desired. The single cutter, with a cutting surface of only one-sixteenth of an inch is the secret. Other makes using multiple blade cutters have a contact with the cylinder wall 150 to 350 times greater—the reason why their cutters are deflected by worn pockets and hard spots, which throws them out of alignment.



See Pages 26 and 27
Attachments for V-8



A guide on each end of the block insures absolutely perfect alignment. The boring bar and cutter head cannot be deflected from its original, accurate location due to pockets and worn spots.

The Only Cylinder Boring Machine Made Boring a Straight Hole
That's a strong claim, but I can make it without fear of contradiction and will show you how to prove it. I SUGGEST that you "mike" the thickness of the "web" between each pair of cylinders, then rebores them with any other make of cylinder boring machine (no exceptions). Then mike them again and you will find that the cylinder bores have converged at the bottom by several thousandths, and are no longer square with the crankshaft . . . K. R. Wilson.

Try It Yourself

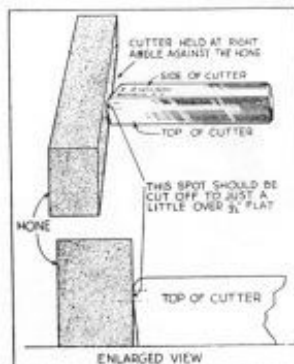


Cutters are Interchangeable Cost Only 50c Each

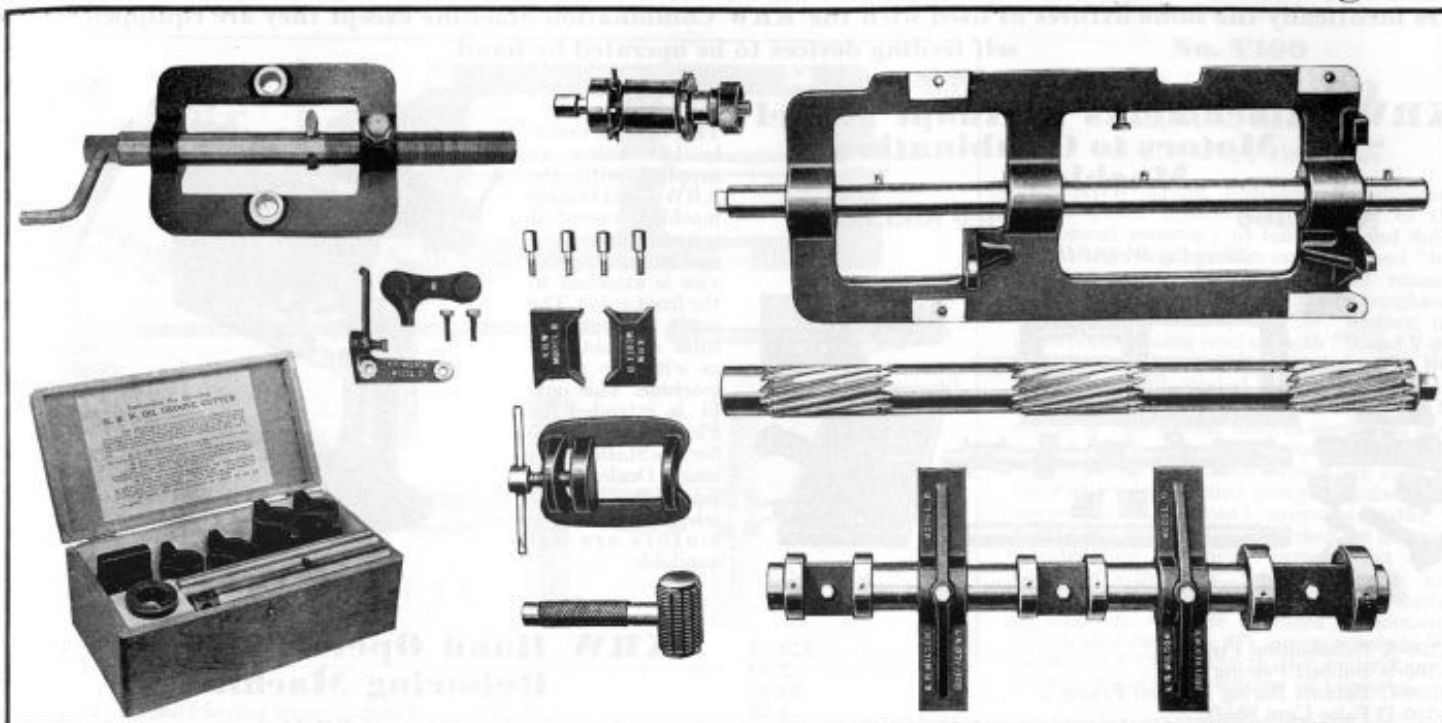
It is not necessary to tie up a KRW Cylinder Reboring Machine to return cutters to the factory for resharpener. They are so inexpensive (only 50c each) you can afford to have several on hand. KRW cutters will not break or dub over when they hit a hard spot or score in the cylinder.

How to Hone KRW Cutters

This picture shows how to hone KRW cutters, to bore smooth-as-glass. Use a square, fine, hard hone, at right angles to the cutter as shown. The flat spot does it.



\$86.00 Group Combination Machine Attachments for "B" Engines

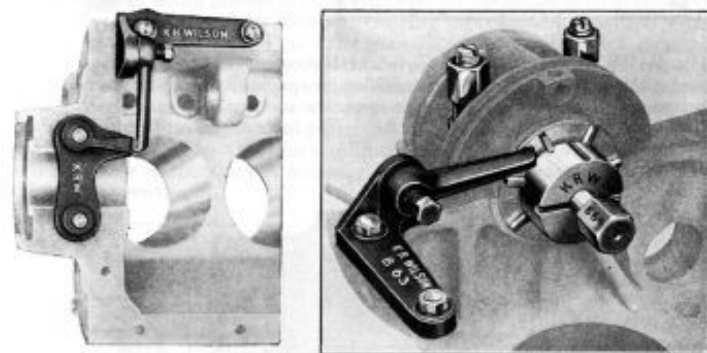


The \$86.00 Group illustrated above includes all the attachments necessary to correctly service "B" motors on your KRW Combination Machine, provided you already have the "A" attachments. It is important that your shop be equipped to handle this work promptly—otherwise you lose the business as your customer goes to a competitor. Only a few of the newer tools are shown in operation pictures.

B-68	Rebabbiting Fixture "B"	\$20.00
B-67	Peining Tool	2.75
A-406A	Rear Main Bearing Clamp	2.50
B-66	Babbitt Boring Frame	32.00
B-64	Main Bearing Facer & Fillet Cutter	6.50
B-63	Rear Main Bearing Gauge	1.50
B-65	Main Bearing Reamer	23.00
B-369	Oil Well Cutter	3.50
B-402	Oil Groove Cutter	9.50

Individual items are priced slightly higher than group prices to cover cost of shipping, invoicing, etc.

Main Bearing Gauge — Fillet Cutter



The KRW Main Bearing Gauge (No. B-63) is the most important tool used on Main Bearing work as all operations start from this point. The B-63 Gauge shown in right hand picture is set up similar to the Model "A" Gauge shown in first picture, except that it is on the opposite side of the block. After fastening the bracket in place, the Gauge is removed and the Main Bearing Cap fastened in position as illustrated. Face off just enough so that the Gauge Arm just contacts the babbitt flange. Next measure the space between flanges of the crankshaft rear bearing (See page 21) with a 3-inch Inside Micrometer or Telescope Gauge illustrated on page 8. Deduct 4 thousandths for clearance and set your 3-inch Outside Micrometer to that size (See page 21). Then face off the other end of the bearing until it corresponds with this measurement. **THIS JOB MUST BE DONE RIGHT** so that the crankshaft will be correctly positioned and the crank pins exactly in the center of the cylinders, otherwise pistons and connecting rods will be "cocked" in the cylinders because no end play has been provided in the pistons for errors.

Hand Operated Group for "B" Engine

For Rebabbiting—Align Boring—Reaming

No. 3B

Price \$95.00

Including all items shown above—plus false camshaft, self feeding mechanism and hand crank

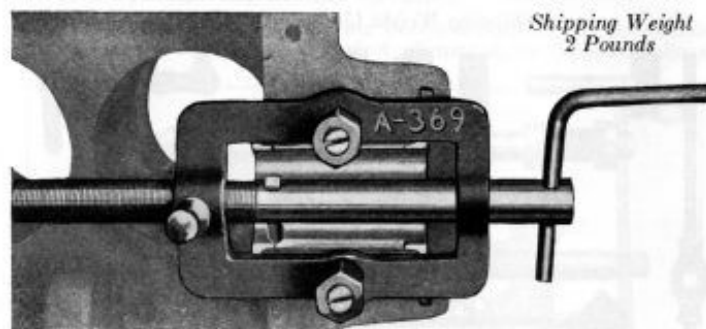
Important

The Main Bearing Reamer included in this group is the same for "B" and V8 Motors

KRW Main Bearing Oil Well Cutter

No. A369 For "A" Motors Price \$3.50

No. B369 For "B" Motors Price \$3.50



Shipping Weight
2 Pounds

The KRW Main Bearing Oil Well Cutter is a simple, inexpensive tool with which ordinary mechanics can turn out the same high grade job as you would get in a new cylinder block direct from the factory. It does the work in a fraction of the time required by any other method. Every job is uniform and alike. The oil well is a very important part of the lubrication system and should receive careful attention—it distributes the oil over the entire bearing also serves as a reservoir. Some repairmen (not mechanics) even file or bevel off the bearing its entire length; this allows the oil to run out the ends of the bearing and very little of it will find its way under the crankshaft. The oil well was put there for a purpose and must not be changed as it affects the circulatory flow of oil resulting in excessive wear, sometimes burned out bearing. It's SO easy to do it right.

KRW "Hand Operated" Main Bearing and Cylinder Boring Outfits

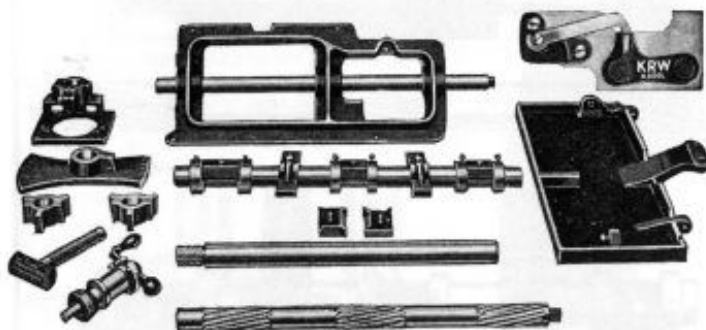
Are identically the same fixtures as used with the KRW Combination Machine except they are equipped with self feeding devices to be operated by hand

KRW Attachments to Adapt Model "A" Motors to Combination Machine

No. A300

Price \$95.00

Shipping Weight 185 Pounds



A300-A Rebabbing Fixture.....	\$20.00
A300-B Babbitt Peining Tool.....	2.50
A300-C Babbitt Boring Bar and Frame.....	38.00
A300-D False Cam Shaft.....	4.50
A300-E Main Bearing Reamer.....	20.00
A300-F Main Bearing Facer and Fillet Cutter.....	6.00
A300-G Cylinder Boring Bar Locating Plugs—Pair.....	3.50
A300-H Cylinder Head End Permanent Guide.....	3.50
A300-I Crankcase End Permanent Guide.....	2.50
A300-J Combination Machine Bed Plate.....	12.50
A300-K 1/8 x 9 x 9 Raising Block.....	2.50
A300-L Rear Main Bearing Gauge.....	1.50

The complete set is furnished at the lot price.

Any individual items may be purchased at prices shown.

The Group listed above includes all attachments to bring your KRW Combination machine up-to-date to handle Model "A" Motors. With a large number of the early models now needing major repairs and complete overhauling, it is important your shop be equipped to handle this work properly and promptly, otherwise you lose the business and customer contact to some competitor.

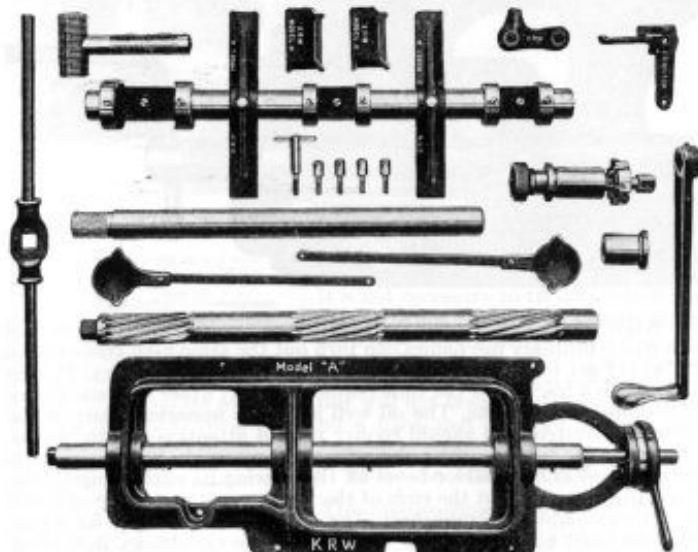
KRW Hand Operated Main Bearing Set for Model "A" Motors

Rebabbing—Boring—Reaming

No. 2BA

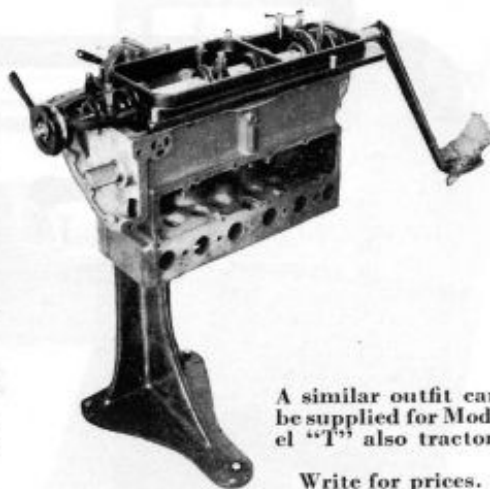
Price \$80.00

Shipping Weight 130 Pounds Boxed



(See next column for operation picture)

This outfit is exactly the same as supplied with the KRW Combination machine, except it is hand operated. A special feeding device is attached to the front guide. The same accurate results are obtained as with the power machine. This outfit is intended for Fleet Owners, small Service Stations and small Dealers outside of the U. S. A. where exchanged motors are not available.



A similar outfit can be supplied for Model "T" also tractor.

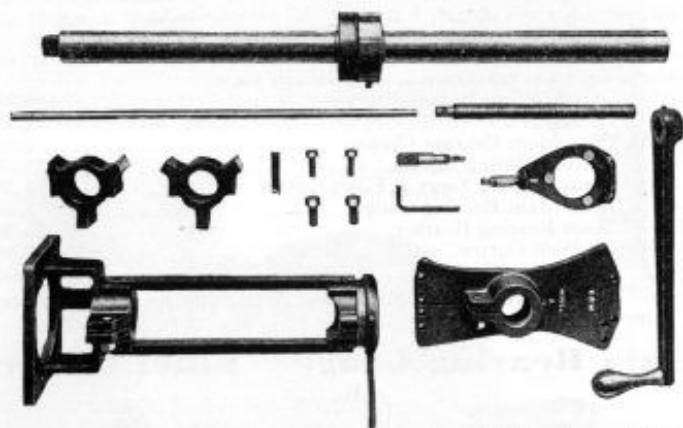
Write for prices.

KRW Hand Operated Cylinder Reboring Machine

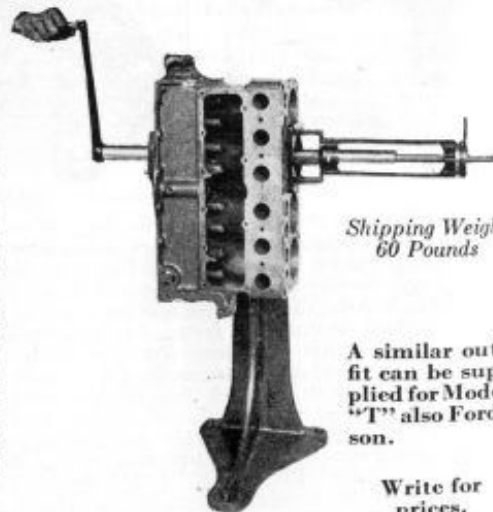
For "A and B" Motors

No. 1BA

Price \$50.00



The KRW Hand Operated Cylinder Reboring Machine is exactly like that used on the combination machine. A special feeding device as shown in operation picture enables the operator to turn out exactly the same kind of work—a dead accurate hole—free from taper and at right angles with the crankshaft. No other cylinder reboring machine can do the job as accurately. Special micrometer furnished with outfit enables mechanic to quickly adjust cutter to rebore any oversize. Cutters cost 50c each. Time required about 10 minutes per cylinder including set up. This outfit is intended for Fleet Owners, small Service Stations and small Dealers outside of the U. S. A. where exchanged motors are not available.



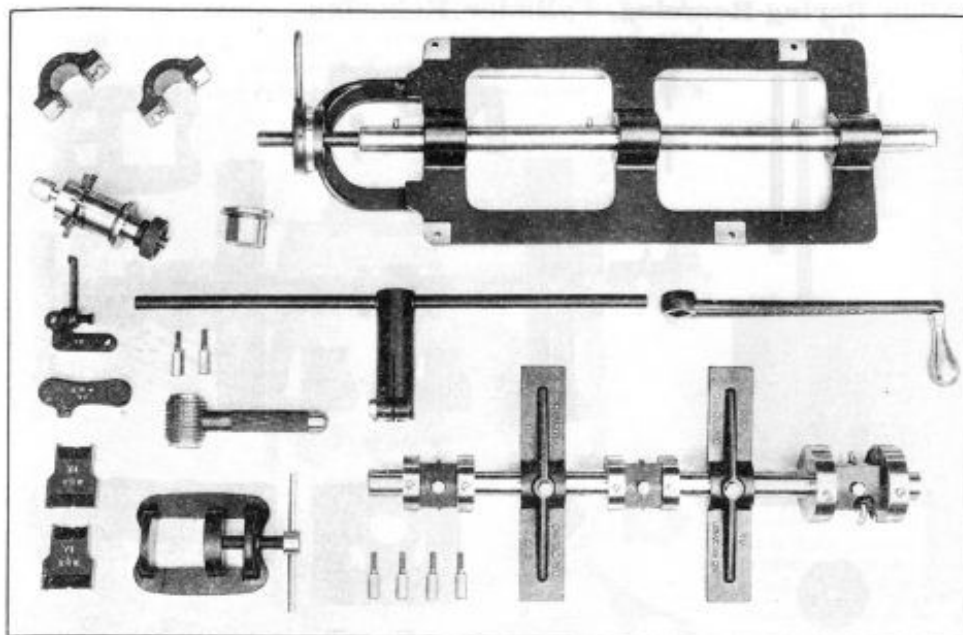
Shipping Weight 60 Pounds

A similar outfit can be supplied for Model "T" also Fordson.

Write for prices.

Read what we say about honing

KRW "Hand Operated" Rebabbiting Group for "V-8 and 40" Motors



No. V100

Price \$55.00

Complete as Illustrated

Shipping Weight 120 Pounds

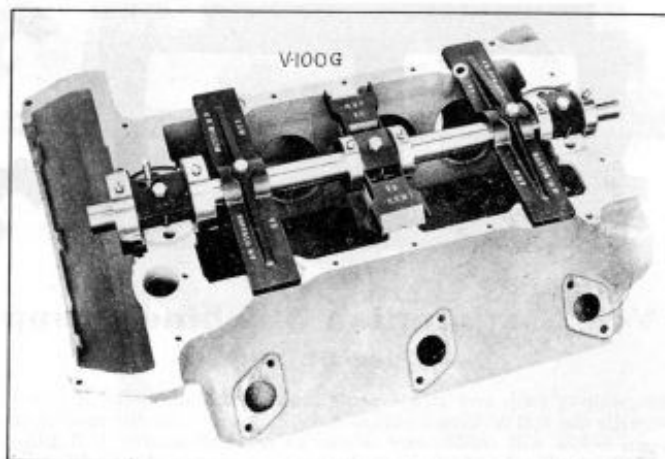
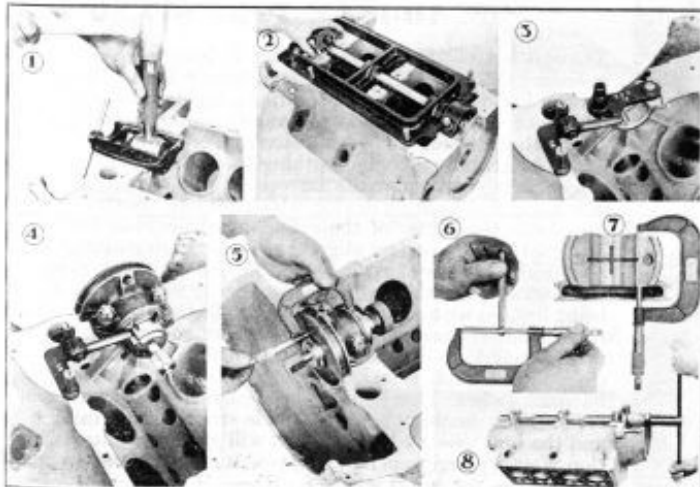
The KRW Hand operated Rebabbiting group shown opposite includes all of the equipment necessary to rebabbit and finish crankshaft main bearings on "V-8" and "40" motors, except the main bearing reamer, which many dealers have already purchased with the \$86.00 group for "B" motors, the same reamer being used on both "B and V-8", but when required will be supplied as No. B65 at \$23.00, as illustrated in Combination Machine group. The boring frame is located by means of two special fixtures similar to snap gauges, which register with the two "reamed" main bearing bolt holes (which are used by the factory for locating every manufacturing operation). This hand operated outfit is identically the same as furnished for use with Combination Machine, except that it is equipped with crank, T-handle wrench, and feeding mechanism, which can be discarded if, later on, machine operated attachments (illustrated on page 27) are purchased. We recommend this outfit to the dealer having a limited potential volume of business.

VF-100A	Babbitt boring frame complete.....	
VF-100B	Locating Fixture (2).....	
VF-100C	5/16" Hex head Cap Screws (4).....	\$28.00
VF-100D	Crank Handle.....	
VF-100E	Rear Main Bearing Gauge.....	
VF-100F	Babbitt Pouring Blocks (2).....	
VF-100G	Rebabbiting Fixture.....	22.00
VF-100H	Rear Main Bearing Clamp.....	2.50
VF-100I	Babbitt Peining Tool.....	2.75
VF-100J	Main bearing facer-cutter.....	6.50
VF-100K	T-Handle Reamer Wrench.....	1.50

Individual items are priced slightly higher than group prices to cover cost of shipping, invoicing, etc.

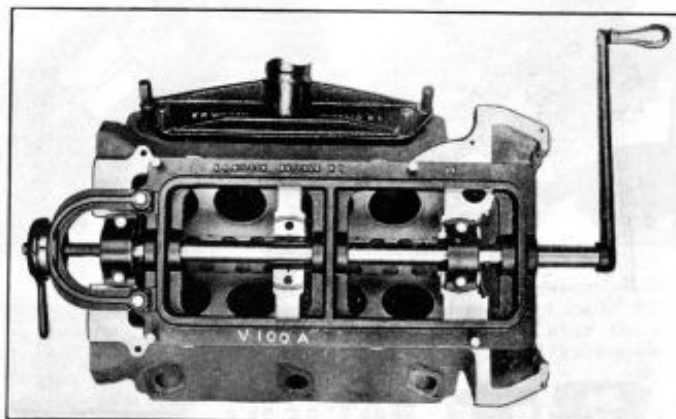
The picture shown below illustrates how certain operations are performed, following the rebabbiting operation as shown opposite.

Fig. 1 shows the rear main bearing clamp in position and bearing being peined. Fig. 2 Babbitt boring frame in position. Two special fixtures straddle the boring bar and locate from two "reamed" main bearing bolt holes; 4 special cap screws are then placed in position and fastened securely. The locators are removed and main bearing caps bolted in position ready to align bore,—followed by align reaming. Fig. 3 Main bearing gauge being placed in position. The set up gauge is then removed and the main bearing facer and rear bearing cap placed in position,—the babbitt is faced off this end until the gauge just touches it. Next, measure the length of crankshaft rear main bearing between flanges with an inside micrometer or telescopic gauge. Fig. 6 Then transfer this measurement to a special 2-3 inch micrometer and take reading. Deduct two thousandths for clearance and face off opposite end of the bearing as shown in Fig. 5. to that measurement. Fig. 7 shows why a special square frame micrometer is necessary. Fig. 8—align reaming when done by hand operation.



ABOVE: Showing the "V-8" Rebabbiting Fixture in place, ready for use. The oil grooves are cast in the babbitt—therefore saving considerable time by eliminating an extra operation.

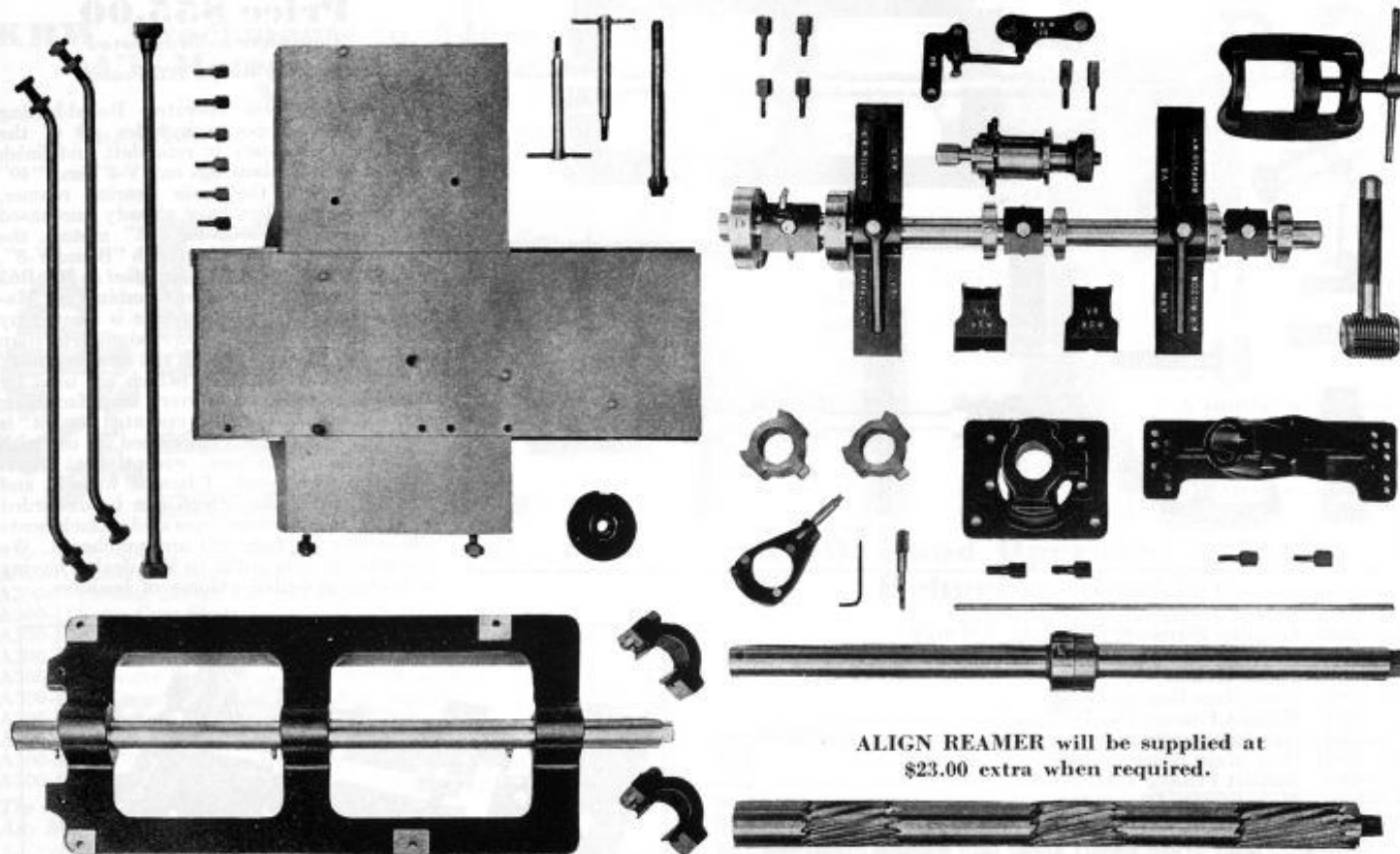
BELOW: Showing the Babbitt Boring Frame in position and the method of locating the boring bar in perfect alignment, as explained above.



Let us rebuild your old Valve Grinder and equip it with the latest improvements to properly service A, B, V-8 and 40 motors. Our factory expert will make your old machine like new. Write for details.

"V-8 and 40" Attachments for K R W Combination Machine

Babbitting, Align Boring-Reaming, Cylinder Reboring

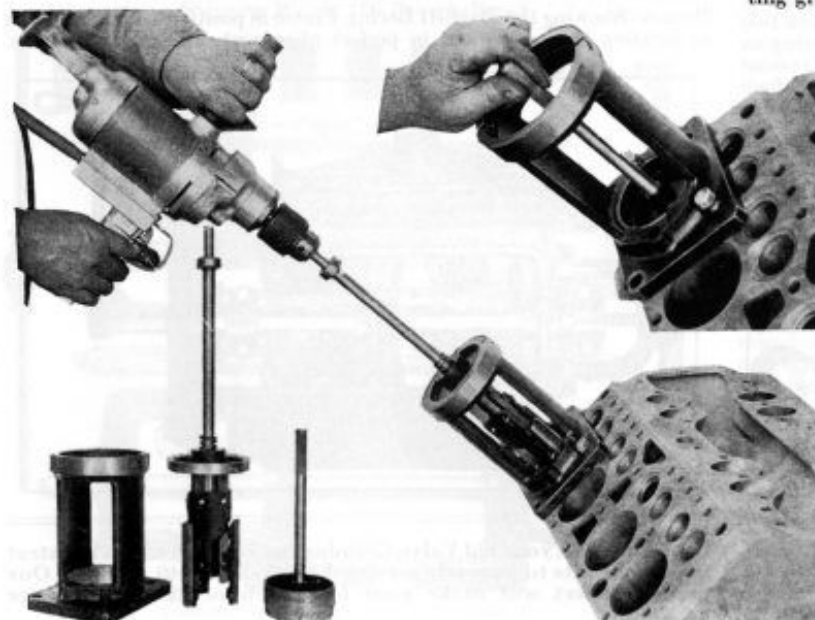


ALIGN REAMER will be supplied at
\$23.00 extra when required.

V-8 Combination Machine Group Price \$99.00

The group of tools and attachments illustrated above were designed for use with the KRW Combination machine, and with the special Hone shown below will enable any dealer to remanufacture "V-8 and 40" Engines, duplicating factory methods and accuracy. An Eight cylinder block can be rebabbitted, align-bored and reamed, crankshaft fitted, Cylinders rebored and polished, ready for assembling, in 3 to 4½ hours.

And when so inclined, a good mechanic can further reduce this time or "sandwich-in" other operations, such as grinding valves, etc. while the machine is in operation. Do not hesitate to rebuild V-8 motors. The operations are even simpler than the 4 cylinder types. Not all motors require complete reconditioning, some only rebabbitting, others may have a scored cylinder or two. Therefore, Dealers located at strategic points should be equipped to render this service for neighboring dealers, Fleet owners, etc. Some "owners" will also object to the "exchange policy" and insist on having their own motor rebuilt. The investment is so small you cannot afford to let your customers go elsewhere for this or any other service. Dealers having already purchased the \$55.00 V-8 Babbitting group can purchase the balance of this group for \$65.00.



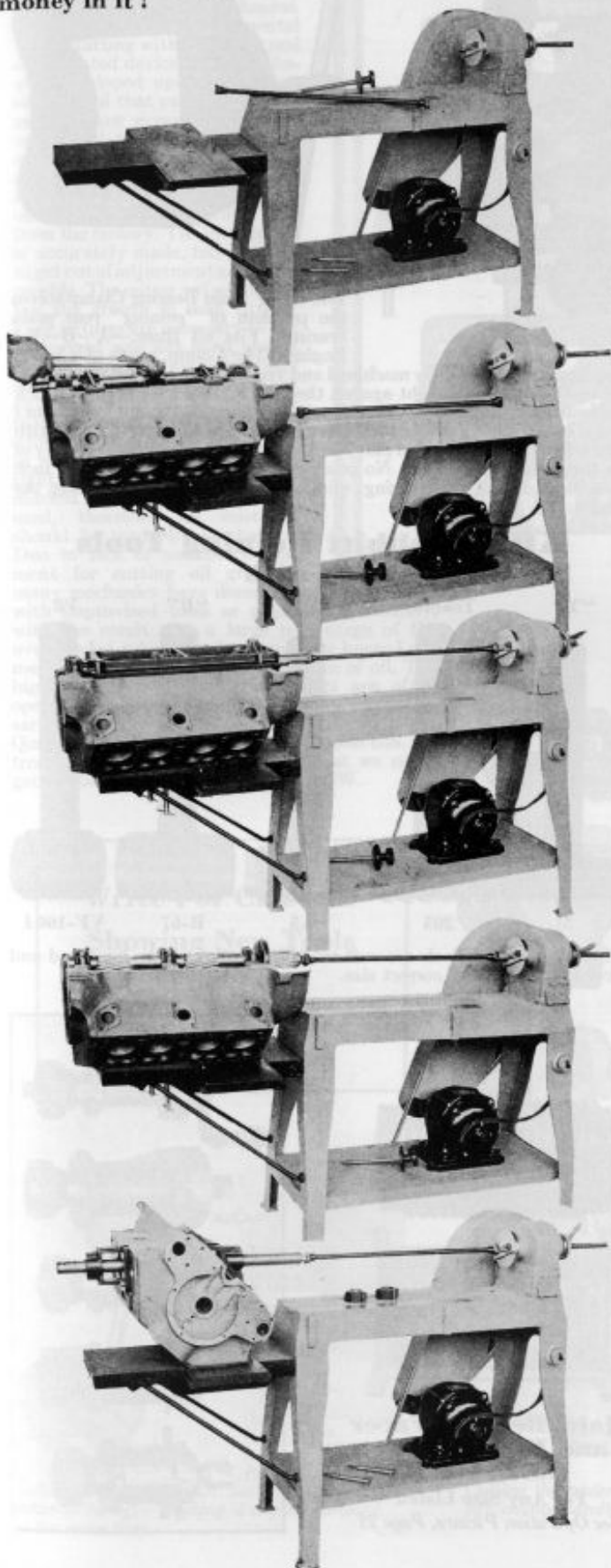
Cylinder Polishing Hone

No. V-111 Price \$16.00

No. AB-111 Price \$17.50

The KRW Cylinder Polishing Hone is designed especially for polishing cylinders after they have been rebored. It removes "wire edge" and tool marks, creating a highly polished surface. This hone, designed by us 11 years ago is unlike any other make. It is totally collapsed when placed in or removed from the cylinder. Therefore "bell mousing" is impossible. Recent improvements, which patents have been applied for, include a new guide and locating device, which not only locates the hone exactly in the center of the cylinder but also has a 4½ inch bearing to insure perfect alignment. This bearing also serves as an automatic device to collapse the hone in a similar manner to the clutch on a lathe countershaft. Fig. 1. Permanent guide is being located with a tapered plug, then fastened in place ready to receive the hone on which the bearing and cap for the permanent guide is located. After the hone is placed in the cylinder this guide is locked in place, against a shoulder with a bayonet socket. This hone is not designed nor recommended for ordinary honing operations. It is strictly a polishing hone and the only one we know of that will give complete satisfaction. Factory engineers have received it enthusiastically. Made in two sizes for A-B and V-8.

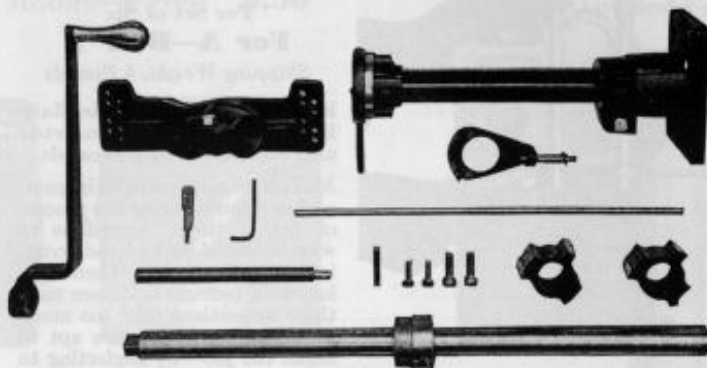
These pictures show the V-8 attachments on the KRW Combination machine,—also how all of the operations are done,—without removing the block from its handy and convenient position. Valves can be ground and cylinders can be polished during the same time the cylinders are being rebored. Get this business—there's money in it!



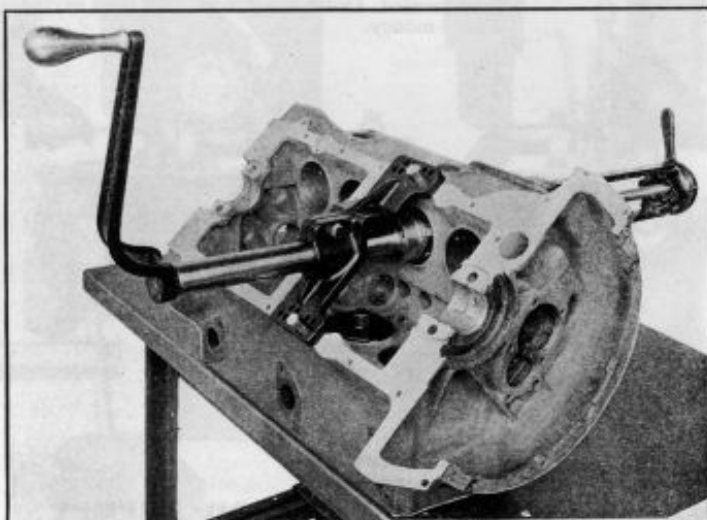
Hand Operated Cylinder Reboring Equipment for "V-8"

No. 1 V-8

Price \$45.00



The KRW Hand operated Cylinder Reboring tools for V-8 are exactly the same as those used with the KRW Combination machine, except that a self feeding device and crank handle are included—which are easily removed in case you might want to use it with Combination machine. No other type of cylinder reboring machine can compete with it for accuracy, as proven many times on factory tests. The same type of machine can be furnished for Model T and Tractor. If interested, write for prices.



V-8 cylinders can be rebored and polished while attached to motor stand or bolted to a bench, as shown.

New Locating Pins Are Required

For Locating Babbitt Boring Frames on 1935-1936 Motors Using Main Bearing Studs

No. VF-100 L

Price \$1.00

For Set of Two

Since Studs have replaced Main Bearing Bolts in 1935 and 1936 Ford Engines, two new two-diameter Locating Pins are required. The upper portion of the pin remains the same size to fit your present Babbitt Boring Fixture Locating Blocks, but the end has been made .024ths smaller to fit the reamed portion of the drilled hole after the stud has been removed. The same pins also fit the Main Bearing Gauge shown in picture.

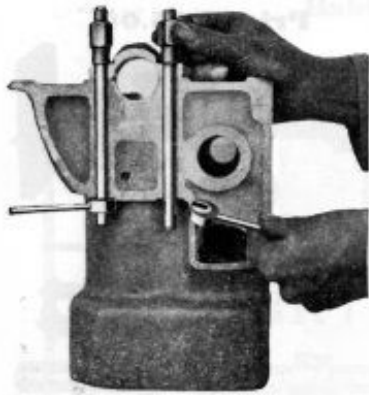


FORDSON TRACTOR EQUIPMENT

We can supply from stock, at "bargain" prices, hand-operated Babbitt-ing and Main Bearing Boring Fixtures, also Cylinder Reboring outfits for FORDSON TRACTORS of the same design as used for A-B-V-8 engines, illustrated above and on page 24. If interested write for Bargain List.

KRW "QD" Main Bearing Bolts

Save from 30 to 60 Minutes on Every Main Bearing Job

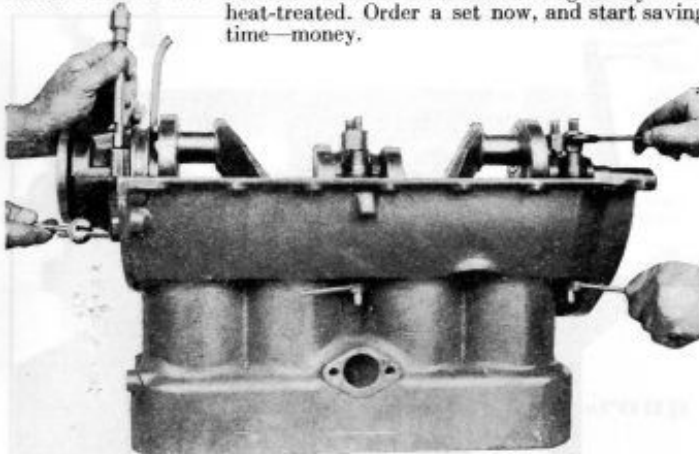


No. 6 Price \$6.00
Per Set of Six
For A-B or T
Shipping Weight, 4 Pounds

KRW Quick Detachable Main Bearing Bolts can be inserted and tightened in 3 seconds.

Main bearings should be inspected 3 or 4 times during the process of fitting them, regardless of whether it is done by hand-scrapping or align-reaming. When regular main bearing bolts are used these inspections take too much time and mechanics are apt to slight the job—by neglecting to

do it, so it is necessary to provide a means that will encourage this inspection and make it easy for the mechanic. **TO OPERATE**—Slip the bolt into position as shown in lower picture, then insert the forked socket. A quarter turn on the hex nut and the bolt is tightened. They operate so quick and easy that no mechanic would ever think of being without a set after using them once. They are also used in connection with the new K R W Oil Groove Cutters, and with Model T motors. These bolts are made from chrome nickel hardened and ground to close limits. The hex nuts and fork wrenches are made of tough alloy steel, heat-treated. Order a set now, and start saving time—money.



Wilson-Turner Babbitt Melter

No. 4 Price \$9.00

Shipping Weight 20 Pounds

The Wilson-Turner Babbitt melter is guaranteed to heat Ford Babbitt hot enough to pour (cherry red) in 8 to 10 minutes. The orifice shoots more than 5 times as much gas as ordinary plumbers torches. Tank is made of heavy drawn steel with welded bottom. Pump is large and well made. Safety valve on tank prevents pumping too high pressure. Special metal pot is designed with four spacing ribs to prevent spilling and maintain uniform space all around it for quick heating. **SAVE TIME and MONEY** by using the right equipment.

Repair Parts

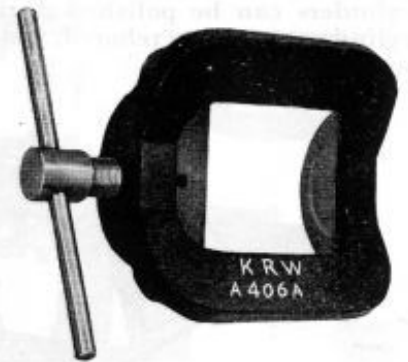
No. 4A	Pump assembly complete	\$3.25
No. 4B	Generating Coil	1.25
No. 4C	Spray Jet (Orifice)	.35
No. 4D	Large Hood	2.00
No. 4E	Coil Shield	1.00
No. 4F	Babbitt Ladle	.75

KRW Main Bearing Clamp

No. A406A

Price \$2.75

For A-B-V8 Rear Main Bearings

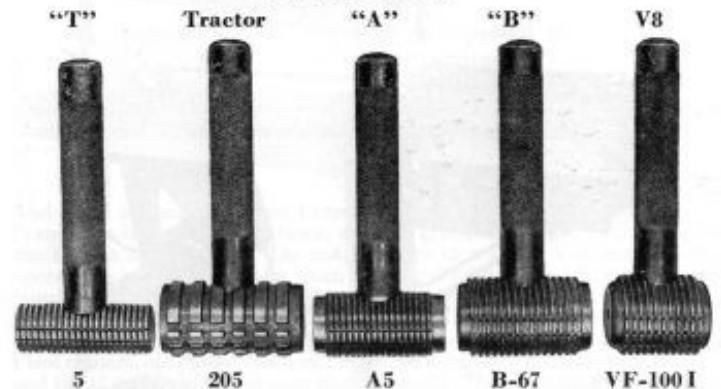


The KRW Main Bearing Clamp solves the problem of "peining" rear main bearings. Fits all three, —A—B—V-8 Engines. The Clamp, made of a heavy

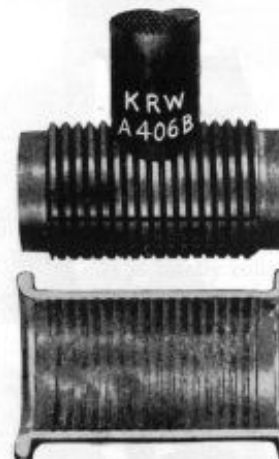
drop forging, is accurately machined and very strong. It holds the flanges of this thrust bearing tight against the cast iron backing around which this bearing is moulded so that the peining operation cannot stretch and loosen it. All three peining tools have been made to fit the Clamp with only a few thousandths end play,—when it is fastened in place on any of the three different engines. No peining is done within $\frac{3}{8}$ ths of an inch from each end of the bearing; eliminates all danger of cracking the flanges.

KRW Babbitt Peining Tools

\$2.75 each



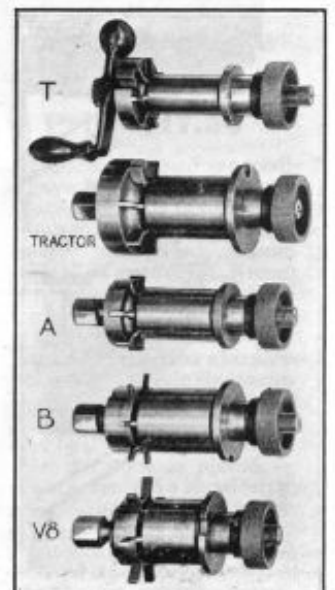
All KRW Peining Tools are well made from alloy steels, hardened and accurately ground to correct size.



Main Bearing Facer and Fillet Cutter
\$6.75 each

For Any Size Listed

See Operation Picture, Page 21



K R W OIL GROOVE CUTTER

No. A402—For "A" Motors—Price \$9.00

No. B402—For "B" Motors—Price 9.50

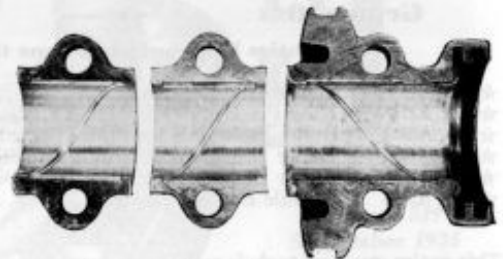
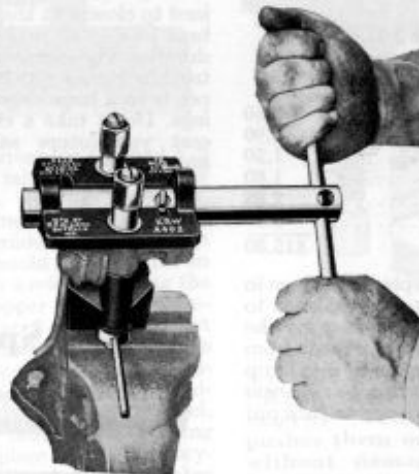
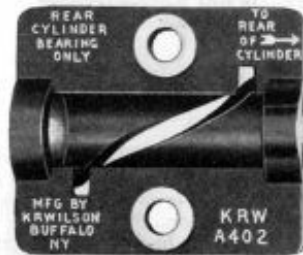
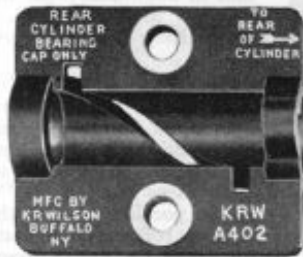
Patents Applied For

The KRW Oil Groove Cutter Set will bring "joy and happiness" to thousands of Ford mechanics. After three years of experimental work, starting with elaborate and complicated devices, we have finally developed and perfected a simple tool that can be sold at a price so low every Ford dealer can afford to buy one or more sets. A half turn of the handle and the groove is cut—the same kind of a job you get in new cylinder blocks and bearing caps from the factory. The instrument is accurately made, has nothing to get out of adjustment and cause trouble. The cutter swivels to follow the groove in each fixture. Four fixtures are necessary to cut both right and left hand spirals in both sizes of main bearings and main bearing caps. Another fixture is included to hold the main bearing caps in a vise while the oil groove is being cut, as shown in the picture on the right. Each fixture is plainly marked where and how to be used, therefore no mistakes should be made by mechanics. Due to lack of suitable equipment for cutting oil grooves, many mechanics have done the best they could with improvised tools or neglected it entirely, with the result that a large percentage of the over-hauled rebabbitted motors have burned out main bearings due to poor circulation of oil. The high speed at which these motors are often operated makes the equal of a factory job necessary.

Quantity production enables us to quote this extremely low price—a fraction of what we could get for them. Order yours today, NOW.

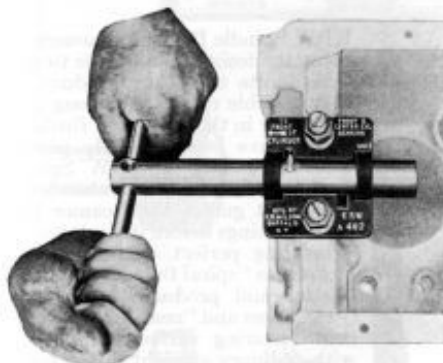
**Write For Circular
Showing New Tools
For the
Lincoln-Zephyr**

Shipping Weight
15 Pounds

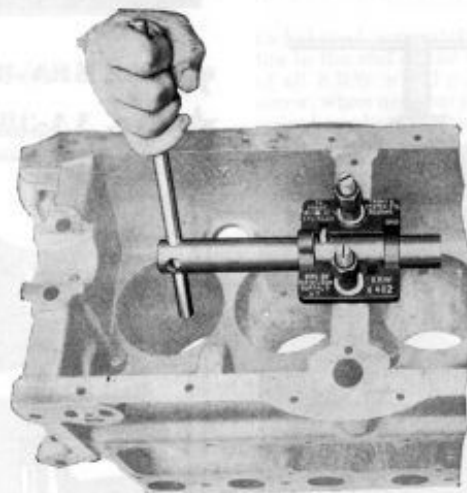


ABOVE: Shows three main bearing caps which have been bored out, align-reamed and the oil grooves cut. They equal a factory job.

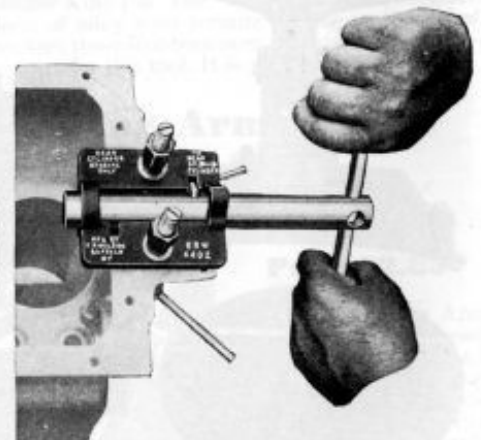
LEFT: Cutting the oil grooves in a rear main bearing cap. The special holding fixture and Q D bolts are used.



Cutting the front main bearing, turn the cutter to the left—pushing it slightly forward at the same time.



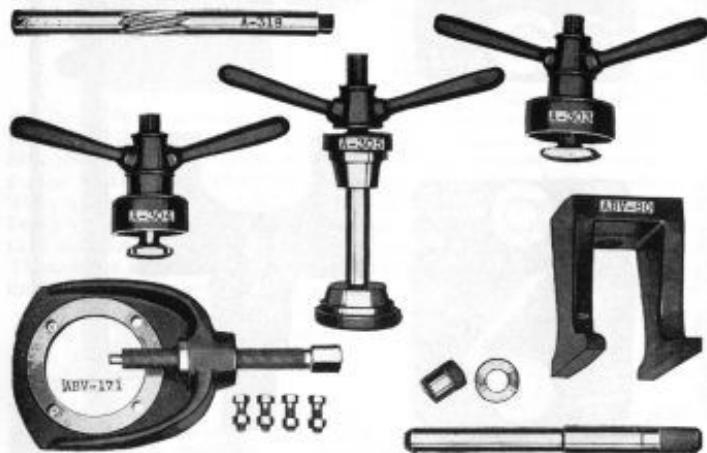
Cutting the center main bearing, turn to the left, change handle to complete full half turn.



Cutting the rear main bearing, turn to the right. Push the cutter forward at the same time.

FRONT AXLE-WHEELS AND STEERING GEAR

KRW Front Axle Tools for A-B-V-8



Group 10



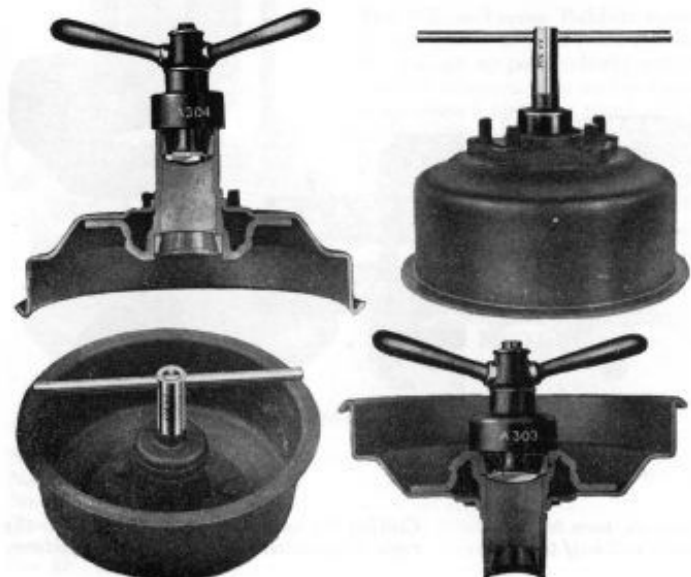
\$14.00

If entire lot is ordered at one time

★ No. ABV80	Spindle Bushing Press.....	\$ 3.50
★ No. ABV171	King Pin Remover.....	2.90
★ No. A303	Roller Bearing Race Puller (large).....	1.50
★ No. A304	Roller Bearing Race Puller (small).....	1.80
★ No. A305	Roller Bearing Race Press.....	2.85
★ No. A318	Spindle Bushing Reamer.....	3.25
		\$15.80

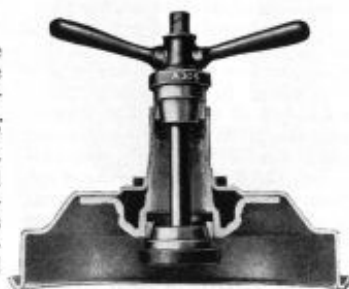
This entire group of tools is required to remove and replace Bearings in Front Axles and Wheels of A-B and V-8 Cars. Every tool is designed to do the job as Ford Service Engineers want it done, thus insuring the same accuracy as a factory product. All tools are accurately made from most suitable materials. Semi-Steel and Malleable Castings, also Drop Forgings are used. The following pictures illustrate just how to use them and the explanation tells why they are absolutely necessary to turn out high grade work that SATISFIES CUSTOMERS.

Showing Race Pullers Used on Cars and Truck Hubs



KRW Front Wheel Roller Bearing Race Pullers No. A303 and A304, also AA303 and AA304 for Trucks, are necessary. The Races must be pulled out absolutely straight otherwise if "cocked," (as usually happens while driving them out) will enlarge the diameter of the bearing recess so much that a new bearing will fit loosely and may turn in the housing. The Puller is a drop forging, accurately machined, heat treated and tempered to stand severe service. The Bonnett is a semi-steel casting machined with a recess to locate it squarely against the end of the hub and in alignment with the center of the bearing race. The Handle is made of Malleable Iron. See page 32. When arbor press group is used these tools are not necessary, except for trucks.

The KRW Roller Bearing Race Press (No. A305) replaces both the large and small bearings simultaneously, or either one separately. Both races must go in "squarely" and be parallel to each other, otherwise the rollers will be damaged and the wheels become loose and dangerous. Avert accidents by doing this job right. See page 32. When Arbor Press group is used this tool is not necessary.



The KRW Roller Bearing Race Driver (No. AA305) for Truck front wheels is designed for Arbor Press operation. It has been especially made to handle both large and small bearings—made from a drop forging of alloy steel. It is accurately machined to closely fit the bearings, then heat treated to make it tough and durable. The carrying capacity and trouble-free operation of a truck depends to a large degree on its bearings. Don't take a chance—it may cost you future sales—maybe a human life.



KRW Spindle Bushing Reamer



★ No. ABV-318	A-B-V-8 Cars	\$3.25
★ No. AA-384	AA-BB Trucks	\$4.00

KRW Spindle Bushing Reamers are correctly designed and made to such close limits that they produce the best possible results. The long pilot fits nicely in the unreamed Bushings which have been carefully pressed into place with a KRW Spindle Bushing Press, (shown elsewhere). This pilot guides the Reamer thru both bushings before it starts to cut,—insuring perfect alignment. The Reamer is "spiral fluted" to prevent chatter and produce that velvety smoothness and "near-hundred-percent" bearing surface—impossible with ordinary straight fluted reamers. A Reamer for this job must be more than—just a reamer. Use KRW SPECIALLY DESIGNED TOOLS and GET RESULTS.



Steering Spindle Bushing Driver

No. ABV-30

No. AA-319

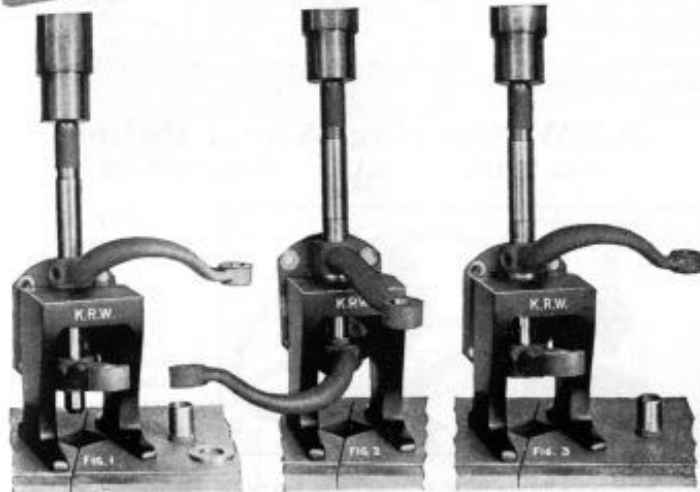
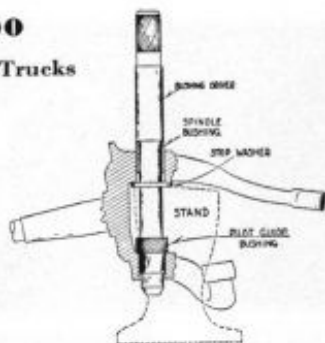
\$3.50



\$4.00

For A-B-V-8

For AA-BB Trucks



The KRW Steering Spindle Bushing Driver and Fixture for A-B and V-8 insures a perfect job being done—at a minimum labor cost. Bushings replaced by this method are driven in straight, without distortion, shearing or upsetting—which means a saving of time on reaming operations. The unreamed bushings are then used to guide the pilot of the reamer and insure perfect alignment. The fixture should be used with an Arbor press but can be used by hand if desired. To avoid damaging the hardened and ground arbor a two-pound lead or copper mallet is recommended. Fig. 1—Driving out both old bushings. Fig. 2—Replacing first bushing, using Stop Collar and Guide Bushing to insure alignment with opposite hole. Fig. 3—Replacing bushing in opposite side, using Stop Collar and unreamed bushing for a guide. The Stand is made from a semi-steel casting. The Driver, Bushing and Collar are tough alloy steel, hardened and ground to close limits to prevent the "thin-walled" bushing from upsetting or collapsing while being driven in place. Do a "factory-quality" job and avoid steering troubles due to slight change of camber from careless installation of these bushings. Truck tool same design except larger.

KRW Front Axle Tools for Trucks



Group 11



Price \$18.00

If entire lot is ordered at one time

★ No. AA303 Roller Bearing Race Puller (large).....	\$3.75
★ No. AA304 Roller Bearing Race Puller (small).....	4.00
★ No. AA305 Roller Bearing Race Driver.....	3.50
★ No. AA319 Spindle Bushing Press.....	4.00
★ No. AA384 Spindle Bushing Reamer.....	4.00
	<hr/> \$19.25

This group of Front Axle Tools for AA and BB Trucks are almost duplicates of those used for Cars, except larger in size. Full description and information covering their use is given on previous page. Every tool is important and necessary to turn out the quality of work that will "stand up" equal to the original factory job.

KRW King Pin Remover

For A - B and V-8 to 1936 inclusive

★ No. ABV-171 Car \$2.90
★ No. BB-506 Truck \$4.00



See Page 319
September 1935
Ford Service Bulletin

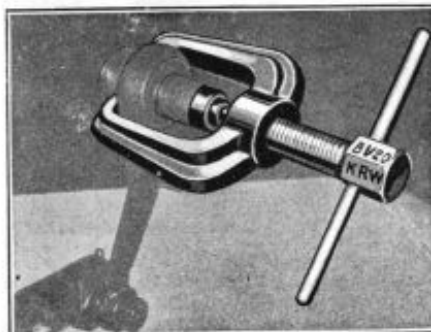
AT LAST!

A simple, effective "King Pin Remover" that pushes them out without damaging any part.

This unique tool bolts directly on the steering spindle body which then becomes a part of the tool itself. This insures absolute rigidity and perfect alignment. The Body is made of certified malleable iron. The screw of tough nickel steel, accurately threaded and having a pilot on the end which just fits in the end of the tubular King Pin. The "Floating Nut" (a feature of all KRW wheel pullers) of alloy steel permits driving on the end of screw, when necessary to start those stubborn ones. We know your mechanics have been waiting years for this tool. It is priced right too.

KRW Steering Arm Puller

For A - B and V-8



★ No. BV-20
Price \$2.85

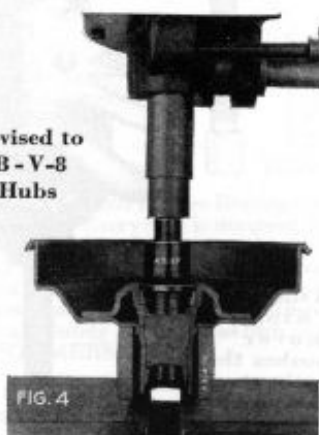
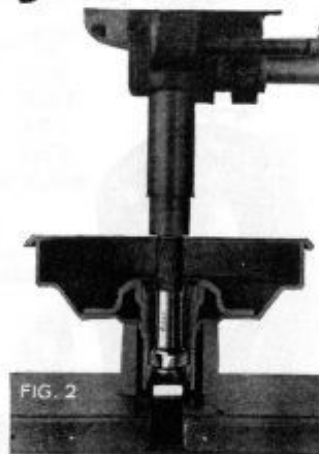
The KRW Steering Arm Puller is correctly designed to do the job quickly and easily. The yoke is a drop forging. The screw is made of nickel steel. All parts are heat treated and hardened to withstand wear and abuse. You must have it to remove a steering arm.

KRW Front Wheel Bearing Drivers

For Use with Arbor Press

Group No. 5

Price \$5.00



Tools Revised to
Fit A - B - V-8
Front Hubs

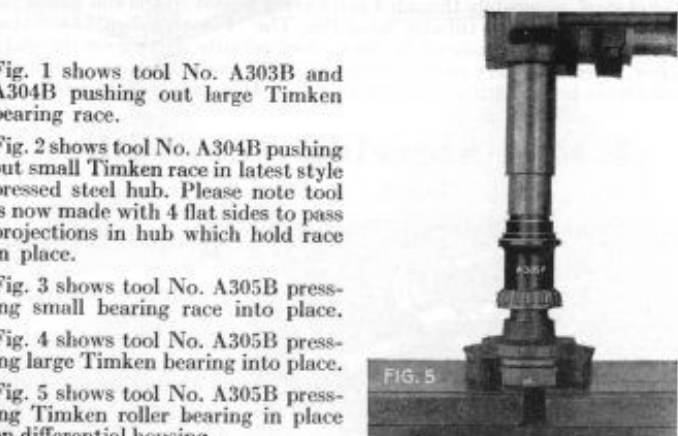


Fig. 1 shows tool No. A303B and A304B pushing out large Timken bearing race.

Fig. 2 shows tool No. A304B pushing out small Timken race in latest style pressed steel hub. Please note tool is now made with 4 flat sides to pass projections in hub which hold race in place.

Fig. 3 shows tool No. A305B pressing small bearing race into place.

Fig. 4 shows tool No. A305B pressing large Timken bearing into place.

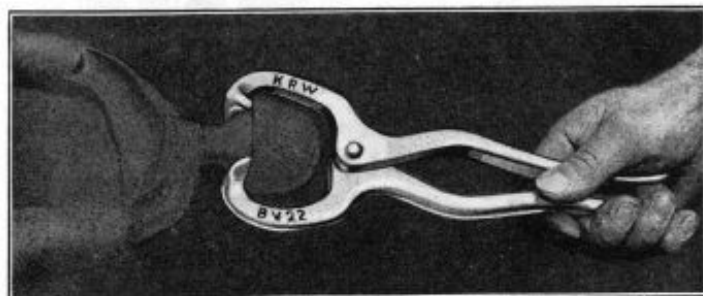
Fig. 5 shows tool No. A305B pressing Timken roller bearing in place on differential housing.

This special set of Arbor press drivers is preferable and will save time over hand operated tools, if the dealer is equipped with an Arbor press. All three drivers are made from alloy steel, accurately machined and heat treated for long service. (See Page 70—) Shipping Weight 12 Pounds.

Pliers for Radius Rod Rubber Ball

No. B-22

Price \$1.35



KRW Pliers for assembling Radius Rod Rubber insulator are very necessary. FORD GENERAL LETTER No. 70 dated July 8, 1932 warns Dealers not to use Oil or Grease when installing Rubber Bushing on radius rod balls or shock absorber links. Grease quickly deteriorates the rubber and destroys its usefulness. These special pliers expand the opening of the rubber ball evenly and without damage. Fifteen second operation—A Satisfactory job.

KRW Steering Wheel Puller

No. V105



Price \$3.50

For A - B
V-8



Here is the finest Steering Wheel Puller on the market. It takes them off easily without damaging the moulded rubber base of the wheel.

It is leather lined for that reason. The Frame is Malleable iron, well ribbed for strength. Every Dealer needs one.

KRW Ignition Lock Stud Remover

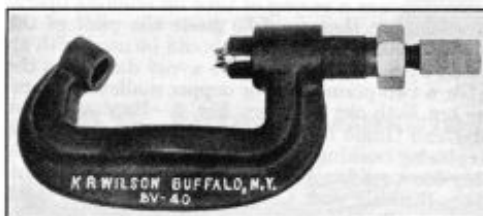
No. BV40

\$2.50

For B - V-8
Only

Does Not Fit
1935 Models

Shipping Weight
4 Pounds



The KRW Ignition Lock Stud Remover will quickly remove the "tamper proof" studs which hold the Ignition Lock in place on the Steering Column of B and V-8 Models (for 1935 Models we recommend drilling and removing the stud with EASY-OUT TAPS shown (group of tools on page 9). This is an emergency tool, seldom used,—but when you need it—you need it badly. It is very powerful. Frame is Malleable, other parts of alloy steel, accurately made. You should have one.

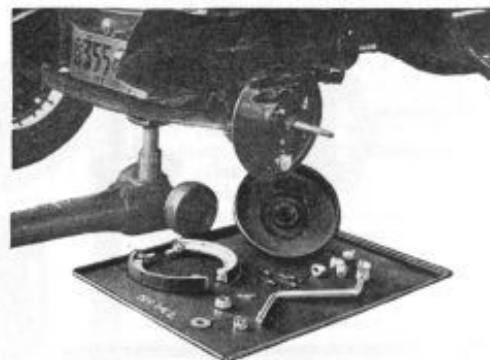
KRW Oil Pan for Wheel Operation

No. 142

\$2.00

Shipping Weight
20 Pounds

KRW PANS for Wheel operations keep the oil, grease and dirt off the floor and encourage cleanliness. Made of 24 Gauge Steel. Size 23 x 33 inches, with a 3/8" Wire bead edge. Hot galvanized after being made. A half dozen or more of these pans will pay big dividends in keeping your shop clean. Shipped Crated.



KRW Spring Shackle Stud Remover

These New Specially Designed Tools will remove Old Shackle Bolts and Sleeves (originally pressed-in under several tons pressure, and now rusted in place) quickly and easily. They are made of tough "axle" steel, accurately machined and heat treated for endurance. SEE! September 1935 Ford Service Bulletin.



No. V-170

Price
★ \$2.75

Shipping Weight
3½ Pounds

OPERATION No. 1 — Remove the "core" of the Shackle Bolt by using tool No. V-170A and Sleeve No. V-170C as shown in cut. Turn the large Hex Nut with an 8 inch wrench and it will come out easily.

OPERATION No. 2 — (Not illustrated) Remove the Fabric Liner with a pair of sharp nose pliers.

BELOW
OPERATION No. 3 — Remove the Shackle Stud "Sleeve" by using tool No. V-170B and Sleeve No. V-170C as shown in cut. Turn the Large Hex Nut with an 8 Inch Wrench.

WARNING!

The "Core" alone can be pulled out easily without breaking, but six out of eight will break off if you attempt to pull the sleeve with it. KRW Sleeve Puller is a full half-inch diameter and designed to pull the sleeve only. BEWARE of other makes claimed to pull Core and Sleeve at the same time.

OPERATION No. 4 — Replace the New Shackle Bolt using tool No. BV-121, illustrated in the next column. Newly designed Pilots and Guides insure perfect alignment and prevent damage to Ford parts.

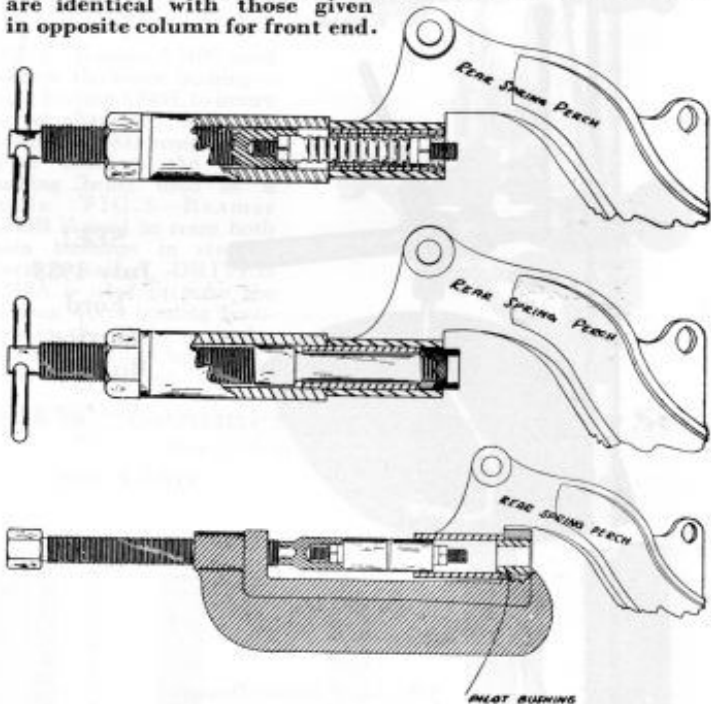
KRW Spring Shackle Stud Replacer

★
No. BV-121 Price \$3.25

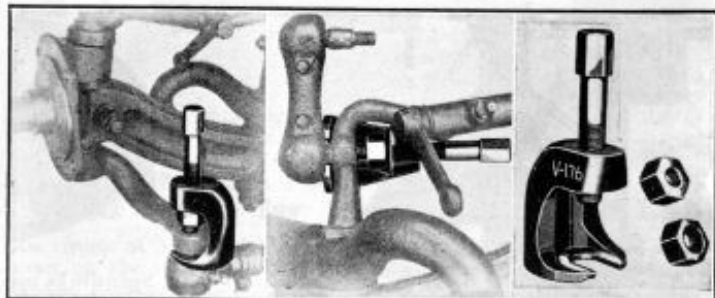


The KRW Spring Shackle Stud Replacer is required to correctly install the new Fabric Lined Spring Shackles. Any attempt to "drive-them-in-place" will damage the thin sheet metal shell and destroy the stud. This tool has recently been re-designed. The frame, made of a tough alloy steel forging, is heavier and stiffer to increase its capacity up to 8 tons. Two sets of Guide Bushings are now furnished to support the tool on both ends and insure perfect alignment while pressing the new Shackle Bolt in place, as shown by the Drawings. DEALERS who have purchased earlier models will be furnished Gratis, on request, with a Drawing showing how to rebuild it. The Pair of Guide Bushings will be supplied at \$1.00 a pair.

INSTRUCTIONS for removing and replacing rear Shackle Bolts are identical with those given in opposite column for front end.



KRW "Steering" Ball Joint Puller
No. V-176 Price \$2.75



This New KRW Ball Joint Puller will remove all of the replaceable Steering Gear Ball Joints as well as the Shock Absorber Connecting Links on 1935 cars. Saves much time ordinarily wasted. The body is a tough, accurately machined, heat treated drop forging. Two caps with concave centers protect the threads and hold the screw in alignment. Every driver needs one or more.

KRW Wheel, Brake Drum, Tire Checking and Balancing Machine

No. 474



Price \$21.50

F.O.B. Factory, Arcade, N. Y.

This New KRW Wheel Checking and Balancing Machine Combines everything you need to accurately check and balance wheels. Indicator is our own exclusive design and manufacture. It registers in units of 5 thousandths and is equipped with "hair spring" to absorb all lost motion. (The Indicator Mechanism has been fully enclosed since making this picture) It is a Precision Made Machine that could not be built better if it sold at five times the price. Quantity production alone enables us to sell it at a price you can afford to pay. GET THIS PROFITABLE BUSINESS IN YOUR COMMUNITY.

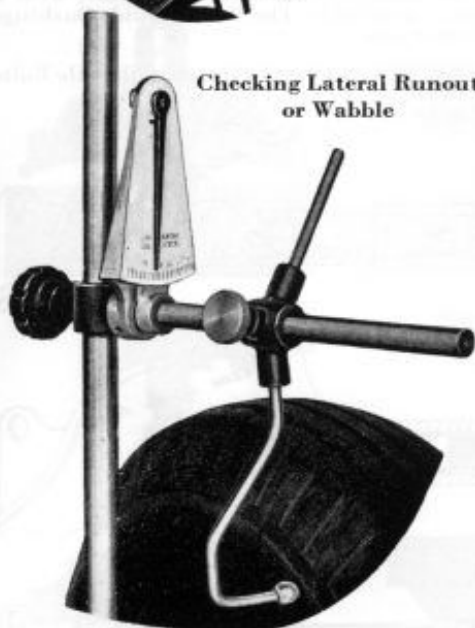


Checking Tire for Radial Runout, Flat Spots etc.

Handles Most All Makes of Cars and Trucks



Checking Runout of Bead Seat



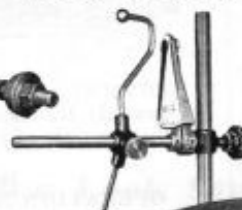
Checking Lateral Runout or Wobble



Patent Applied For

SEE!
July 1935
Ford
Service
Bulletin

Safety at High Speeds (50 to 90 M.P.H.)
Calls for "Perfectly" Balanced Wheels



Checking Wheel Balance Use No. 116A Balancing Weight



Nothing is to be gained by rapid rotation of a wheel in checking for balance, as no mere rotation of the wheel can duplicate actual road conditions in which the bottom of the wheel is not moving and the top of the wheel is moving at twice the speed of the car.



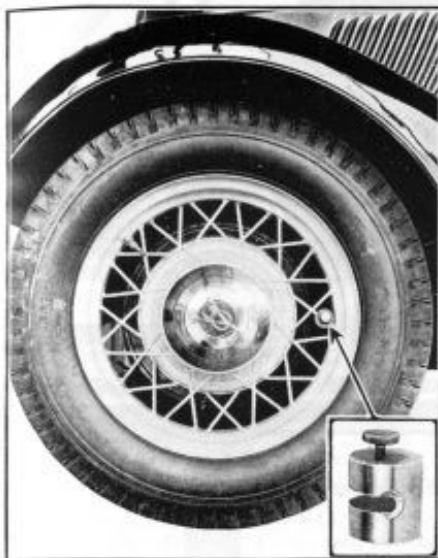
Checking Brake-Drum for Concentricity, Wear and Wobble

Spindle is mounted on large, annular ball bearings to insure accuracy and extreme sensitivity. All other parts hardened, ground and balanced.

KRW Wheel Balancing Weights

No. 116A For 17 inch wheel }
No. 116B For 18 inch wheel }
No. 116C For 16 inch wheel }

75c Each



Important!

May 1933 also July 1935 Ford Service Bulletins explain how and why Ford wheels are balanced.

In production, the factory holds all of the parts going into the hub, drum, wheel and tire assembly to extremely fine limits of balance. The assembly is then tested for balance as an assembly, to prevent the possibility of accumulated error of these parts amounting to more than one ounce. 20 inches from the center of the wheel. Every Ford tire is balanced and marked with a red spot where it

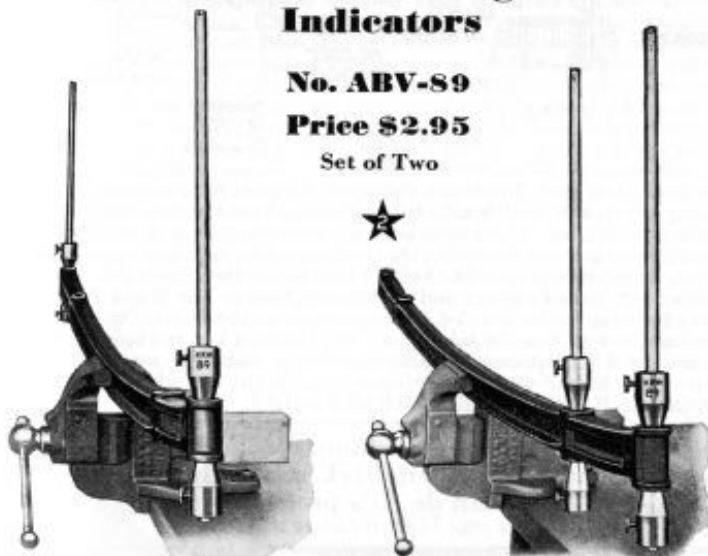
should be assembled with the valve stem. It is, therefore, important that whenever tires or any of the wheel parts are changed that the assembly be rechecked to insure the same degree of safety and easy steering, as originally built-in at the factory. Two pages of important information are awaiting you in the May 1933 Ford Service Bulletin. Page 43, Model 40 Instruction book also cautions car owners. Several large tire manufacturers now recommend and sell tires in matched pairs for the same reason. Three of these special weights are required for 16-17-18 inch wheels. They are made of aluminum and held to an accuracy of one-half a gramme variation. **YOU NEED THEM!**

KRW Front Axle Alignment Indicators

No. ABV-89

Price \$2.95

Set of Two



It is no trouble to straighten front axles when you use KRW Axle Alignment Indicators. They find the bends and twists that cause "shimmying" and tire wear. The low cost of this set makes it possible for all shops to purchase them and be able to repair axles so that they steer correctly. They fit all Models from "T" to 1936 Inclusive.

KRW Steering Post Screwdriver



No. A345

Price 60c

6 for \$3.00

This tool is absolutely necessary for adjusting "Gemmer" Steering gears in the car. See Fig. 640-649 February 1929 Ford Service Bulletin. Made from a drop forging of tough alloy steel.

KRW "Ford" Steering Sector Set

No. A348

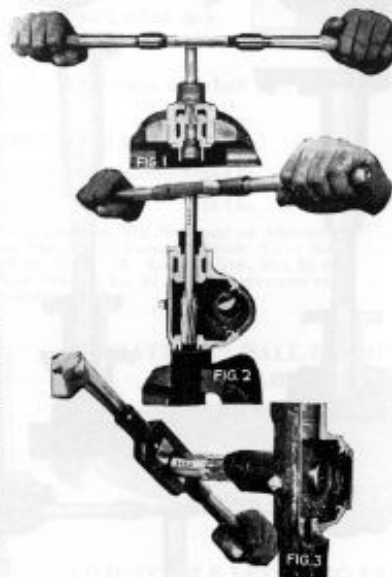
Price \$13.00 Set

For 1928 Cars Only



More than 750,000 Ford Built Steering gears made prior to August 1928, will not be discarded or replaced with "Gemmer type" except in case of wrecks, therefore many of them will be coming in for repairs and overhauling. This complete set of reamers, a bushing driver and a reaming fixture will enable you to get accurate results and turn out the kind of a job that's safe to drive. There is no substitute for a good job. You need this complete set.

FIG. 1—Reamer A348C used to ream the lower bushing—using Fixture A348E to insure correct alignment. FIG. 2—Reamer A348D reaming the upper bushing, the lower bushing being used as a guide. FIG. 3—Reamer A348B is used to ream both main bushings in steering worm housing. DRIVER A348A is used to press the steering worm housing bushings in or out in a similar manner described by Fig. 6-7 on the Gemmer set.



KRW "Gemmer" Steering Sector Set

For 1929 to 1936 Cars Inclusive

No. A403

Price \$9.00 Set



Shipping Weight
9 Pounds

AA403A Reamer for AA-BB Trucks \$4.35
AA403F Driver for AA-BB Trucks \$1.85

This Group of 5 Special Tools together with the New V-177 Group shown on the next page, for removing and installing Sector Shaft "Needle Bearings" used in 1936 cars, is all you need to handle all Steering Gears used on Ford Cars manufactured since August 1928 to 1936 inclusive. AA and BB Trucks have a larger Sector shaft and require a larger Bushing Driver and Reamer as priced above. The other three tools in this group handle the Timken Bearings in trucks as well as cars.

Now I will show you how to use and make money with the set of "Gemmer" Steering Gear Tools illustrated on previous page. Study these pictures carefully, then you will appreciate the necessity for correctly designed tools to do this job right. There is no competitive substitute on the market,—makeshift tools and a poor job might cost a life. These tools are accurately made and worth their cost on the saving of time alone on three jobs. Please refer to pages 517-518 December 1930 Ford Service Bulletin for complete information.

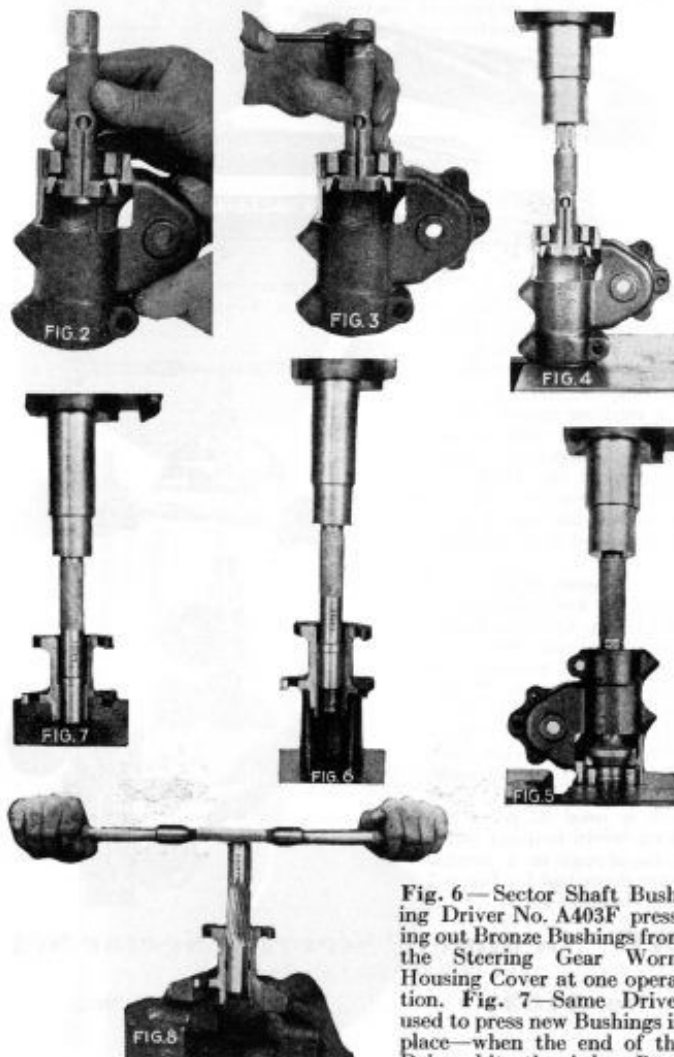


Fig. 6 — Sector Shaft Bushing Driver No. A403F pressing out Bronze Bushings from the Steering Gear Worm Housing Cover at one operation. Fig. 7—Same Driver used to press new Bushings in place—when the end of the Driver hits the Arbor Press Bed, the first bushing is OK.

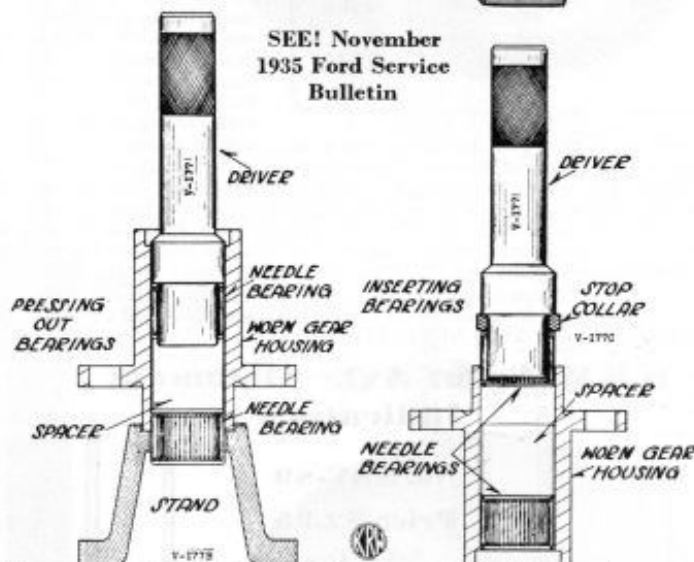
The top Bushing is pressed in just flush with the top of the housing. The Space between them is used as a Lubrication Well. (The KRW Driver is very accurately made. The Pilot is hardened and ground to correctly fit the unreamed Bushing, to prevent upsetting the ends or collapse of the Bushing while being pressed into place. These Bushings are very thin and easily damaged by using Makeshift Tools.) Fig. 8 — The Piloted, Spiral Fluted, Reamer No. A403A reams both Bushings at one operation, insuring perfect alignment, and an extra smooth, accurate fitting job. Driver No. A403C (shown on preceding page, but not illustrated) is used with an Arbor Press or light Sledge Hammer to "start" the Timken Roller Bearing Race from the bottom of the Steering Gear Housing, through the Cap Screw holes, so that the expanding Driver No. A403B may be raised into position as shown in Fig. 2. Fig. 3—This Driver is expanded by tightening the nut on the end of the screw. Fig. 4—Shows this Roller Bearing Race being pushed out with an Arbor Press. Fig. 5 —Shows Tool No. A403D being used with an Arbor Press to replace a new Timken Race. Note: The first several thousand cars were built with a standard "pitch" Bearing but, later on, these Bearings were changed to a greater angle to increase the "thrust" capacity and make Steering easier. DISREGARD old Numbers BV 33-34-35 as the Tools you purchase today will Service all three,—A, B and V-3 Steering Gears. Remember, YOU CAN'T REPAIR A STEERING GEAR WITHOUT THEM.

First impressions are sometimes lasting ones. Dealers should be particular to see that their service departments measure up to the high standards required to operate against keen competition.

"Needle Bearing" Tools for 1936

No. V-177

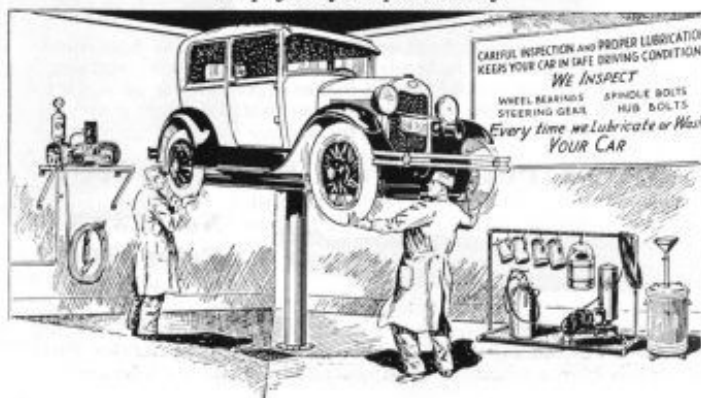
Price \$2.50



The new set of tools illustrated above are required for removing or replacing the New Type "Needle Roller Bearing" used on Steering Sector Shafts of 1936 Cars. These tools are very accurately made to do this job correctly and prevent damaging the Retainer while installing these more or less, delicate Bearings. The Left Picture shows the Driver No. V-177 pushing out both Bearings and the Spacer Sleeve. The Right Picture shows the Stop Collar No. V-177C in position on the Driver No. V-177, pressing the new Bearing into place. The Housing Cover Plate is then reversed and the opposite Bearing installed in the same manner. The Stop Collar has a "formed" surface to match the end of the Bearing Retainer. YOU WILL NEED THESE TOOLS.

Regular Inspection will do more to build confidence and bring your customers back again than anything else you can do. It's profitable too.

See page 73 for a picture story.



KRW - BEAN "Universal" WHEEL ALIGNER

No. 493 ★
Price \$155.00

F.O.B. Factory, Lansing, Mich.

\$25 CASH WITH ORDER TO GUARANTEE TRANSPORTATION CHARGES



The KRW-BEAN "Universal" Wheel Aligner, for Cars and most all Trucks, is the fastest, most modern and accurate wheel aligning equipment available. It is faster than any other because of its simple design construction and the fact that all readings are taken direct from the "Scales" provided for each front wheel, showing, CASTOR—CAMBER—TOE IN—TOE OUT—KING PIN INCLINATION, ETC. Every check is mechanical. No spirit levels are used. A Wheel base Gauge is another added-important feature, for it is necessary to know that the wheel base on each side is exactly the same length, and that the Front and Rear Axles are parallel with each other—otherwise most of the steering checks are useless. For example: A Car has been wrecked, hit a tree or telephone pole, or has turned over, may have a twisted and distorted Frame which has thrown both Front and Rear Axles out of original alignment so that the Wheels do not "track" on the road surface. Turntables (14 inches diameter), on which the Front Wheels are supported, are equipped with large Ball Bearings which permit them to revolve and float in all directions, a requirement for the accurate checking, at various angles, with the weight of the Car on the Wheels. The outfit requires a floor space of 10 x 16 feet. Easily installed on most any floor because of adjustable leveling Legs on Runways and Leveling Screws on Checking Units. To more fully appreciate the simplicity, accuracy and ease of operating this outfit, just study the pictures on the next three pages and you will be convinced. Obsolete, indirect methods dependent on portable, inaccurate Hand Gauges are no longer suitable to obtain the driving and riding qualities built in to present day Cars. Wheel Alignment is a Service that can be performed satisfactorily by an ordinary Mechanic, using the proper equipment and following the simple instructions furnished with the outfit, also the new 100-page Book entitled FORD SERVICE SCHOOL "Wheel Alignment" issued by the Service Department of the Ford Motor Company, whose Service Engineers have tested, improved and "approved" this equipment for their Dealer's Service. With KRW-BEAN Aligning Equipment, front end checks can now be made to duplicate actual operating conditions on the road. High speed driving with larger cross section, smaller diameter tires and softer springs, has made hard steering a common complaint on at least 75% of all makes of Cars of modern design and as a result of these new conditions and for "Safety Sake," should

be carefully checked with accurate Wheel Aligning Equipment at least once or more every 15,000 miles. Many Dealers are now doing a business of \$300 to \$500 a month in this Department and as a rule the equipment pays for itself from extra profits in 3 to 6

months. KRW Prices are only a fraction of what you would pay for satisfactory equipment elsewhere.

SHIPPING WEIGHTS

Crated for Domestic Shipment 1300 Lbs.
Boxed for Export 1545 Lbs.
Correction Tools, Boxed 275 Lbs.

FREIGHT RATES per 100 Lbs. Via National or Universal Carloading Co. From Factory at Lansing, Mich. To— New York City \$1.19, Buffalo, N. Y. .78, Kansas City, Mo. \$1.39, Pittsburg, Pa. .83, New Orleans, La. \$2.13. In some cases regular freight rates are slightly higher.

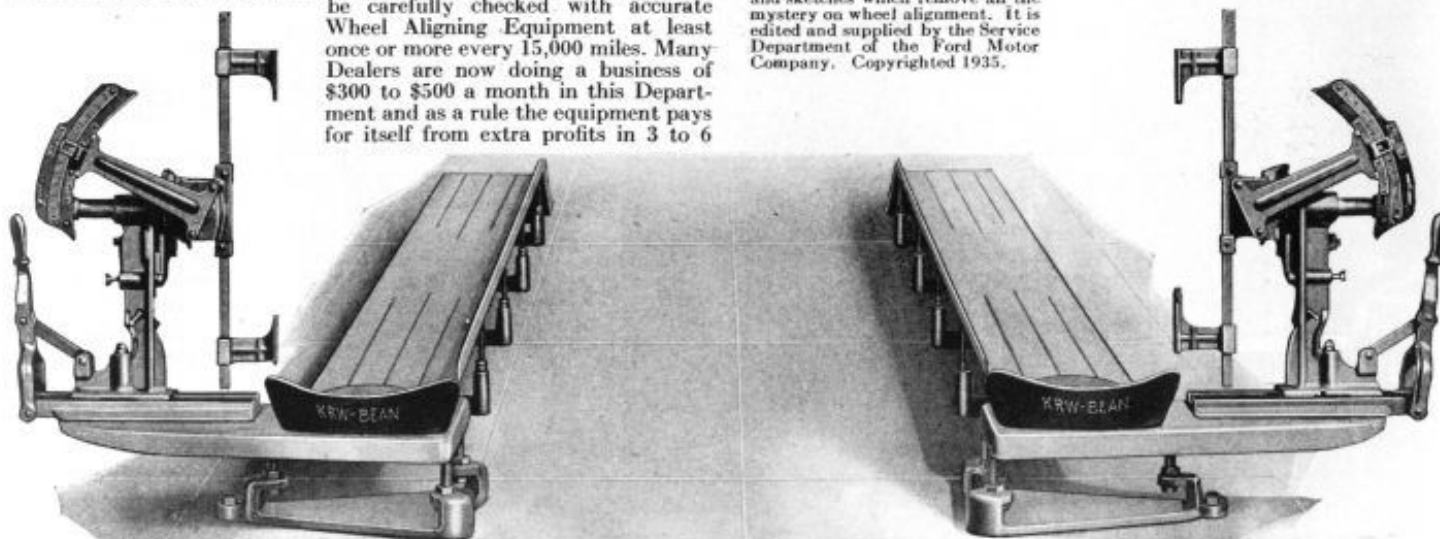


This 100 page cloth bound book on Wheel Alignment is packed full of valuable, authentic, information expressed in plain, easily understood language and illustrated with nearly a hundred pictures, drawings and sketches which remove all the mystery on wheel alignment. It is edited and supplied by the Service Department of the Ford Motor Company. Copyrighted 1935.

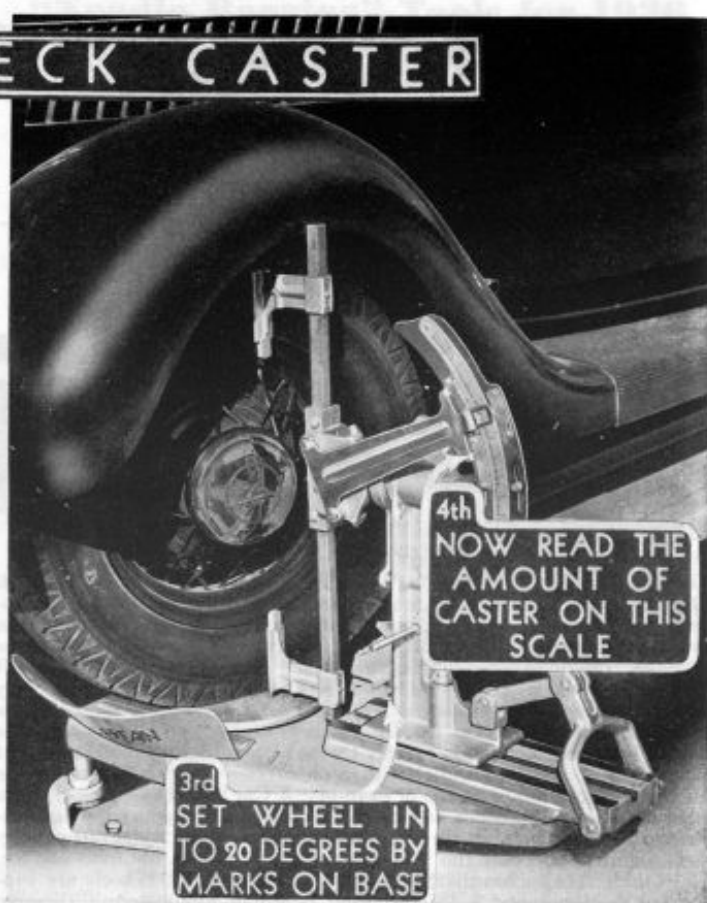
"FLOATING," BALL BEARING, TURNABLES



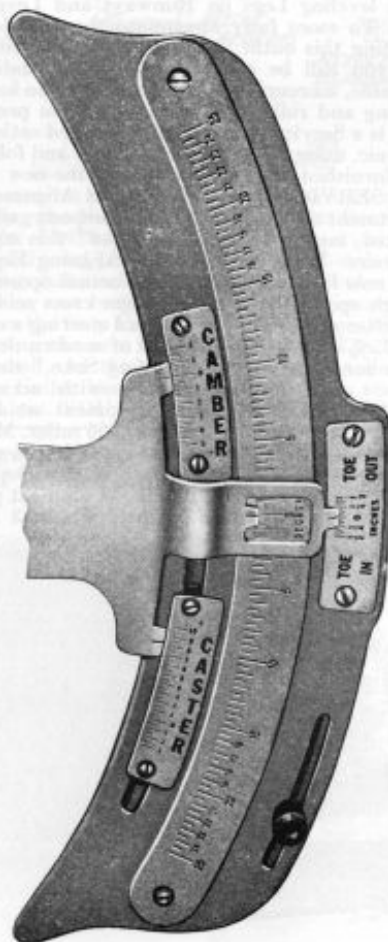
ADJUSTABLE LEVELING LEGS



HOW TO CHECK CASTER



CAMBER CHECK



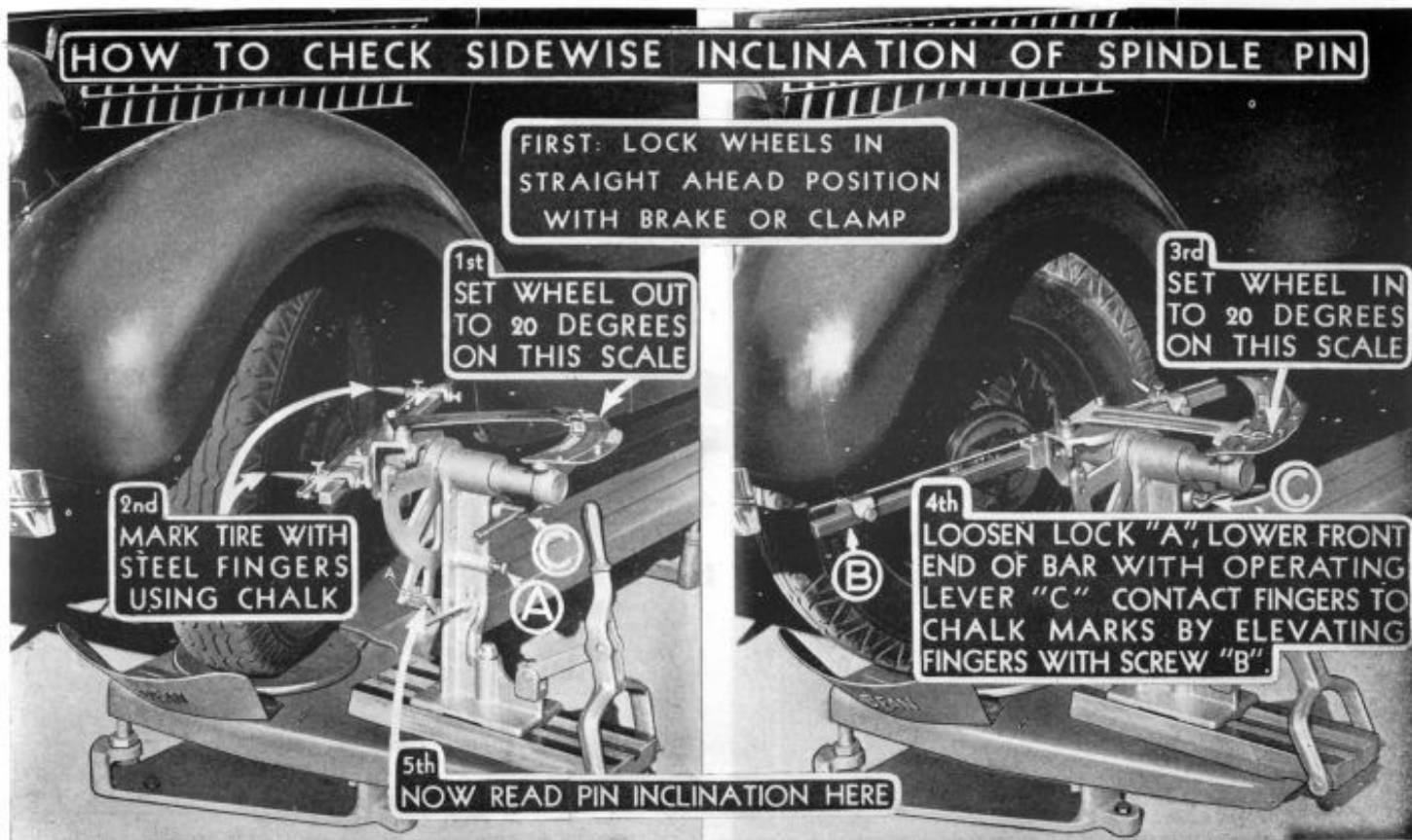
Direct Reading Scales

All readings are direct on simple, easily read scales. No spirit levels. No figuring. No addition or subtraction. Just push the fixture against the wheels and the gauge shows you the facts. Guess work is entirely eliminated.

See!

DECEMBER 1935
issue of
POPULAR
MECHANICS
MAGAZINE

a 4½-page story entitled, "The Secrets of a Smooth Ride." It contains important information pertaining to wheel alignment.



These pictures show clearly
how checks for

Caster

Camber

K. P. Inclination

Toe-in

Toe-out

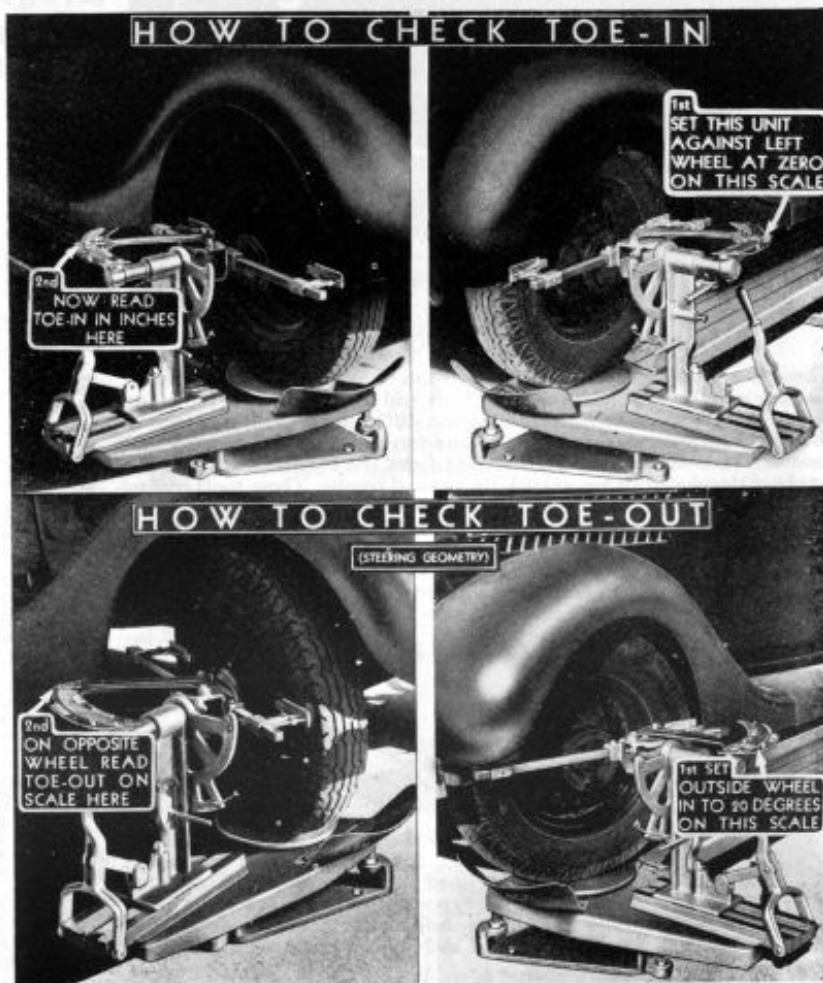
(Steering Geometry)
or Turning Radius)

are made with One Unit
the KRW-Bean Wheel Aligner

Notice how easy and simple it is
to make all five checks

You can operate by following
these pictures

There can be no halfway measures in Wheel Aligning Service. If you have proper equipment and correct knowledge of how to use it you are in it to stay. If not, your business will soon go to those who are in position to give the accurate service required. *K. R. Wilson*

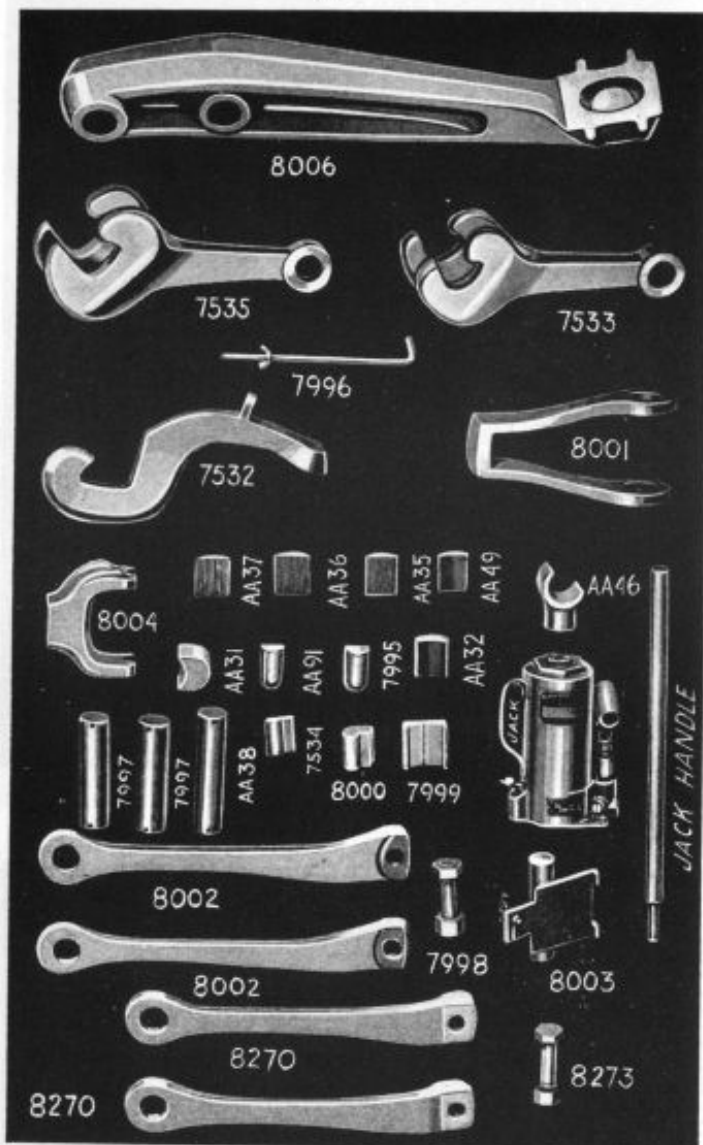


KRW-BEAN Axle Correction Tools

No. 494



Price \$85.00



Shipping Weight 275 Pounds

These new tools have been designed especially for correcting Caster, Camber and Twisted Axles on Ford Cars and Trucks without removing them from the car. Ford Truck axles are stiffer and require more power to bend them than any other make, and for that reason a stronger and heavier set of Correction Tools, made from the toughest alloy steels, has been developed to accomplish the desired results. These tools cost us much more to manufacture and we sell them for nearly half what competitors charge. A twelve-ton Hydraulic Jack is included as part of this powerful set. It is clamped to a special base when operating Correction Tools and may also be used as a standard jack for lifting the front end of the car if mounted on special Jack support. Or a block of wood of correct height. Correction Tools for other cars and trucks, including "Knee Action," etc., can be supplied. If interested, write us.

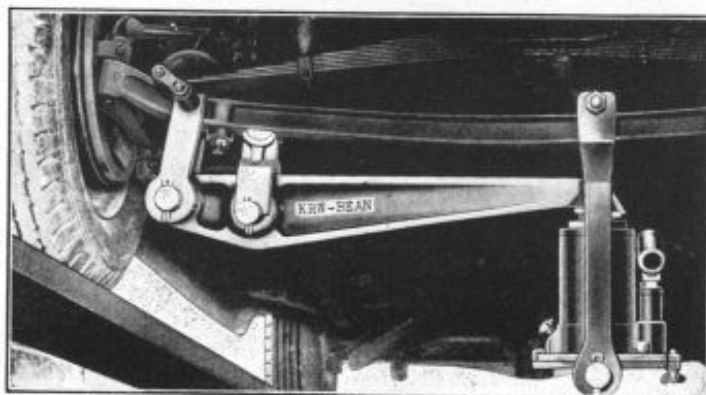
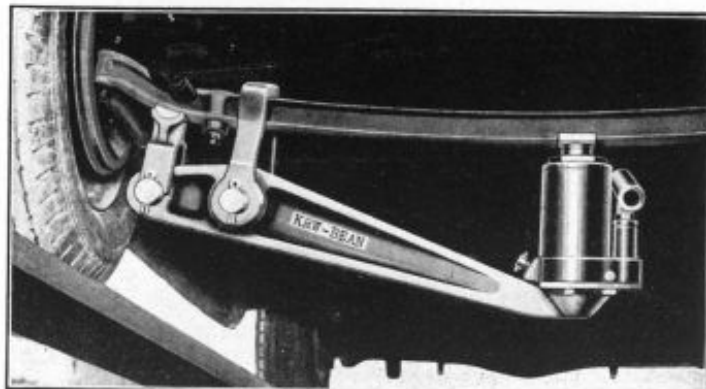


Jack Base

No. 499

Price \$3.25

This adjustable Jack Base is made especially for use under our regular 12-ton Hydraulic Jack furnished with Correction Tools, for raising all types of front ends when car is on the Aligner. Adjustable to three heights, it is better and more attractive than a block of wood.



- 1—Decreasing Camber
- 2—Increasing Camber
- 3—Twisting Axle to Correct Caster

The Factors of Wheel Aligning

CASTER

The amount in degrees of the backward tilt of the axle and king pin.

CAMBER

The amount in inches or degrees that front wheels are tilted outward at the top.

KING PIN INCLINATION

The amount in degrees that the tops of the king pins are inclined toward the center of the car.

TOE-IN

the adjustment whereby the distance between the front wheels is less at the front than it is at the rear of the wheels.

TOE-OUT

When driving on a curve the wheels go into a toe-out position—farther apart at the front of the tire than at the back. This condition increases with the sharpness of the turn.



REAR AXLE

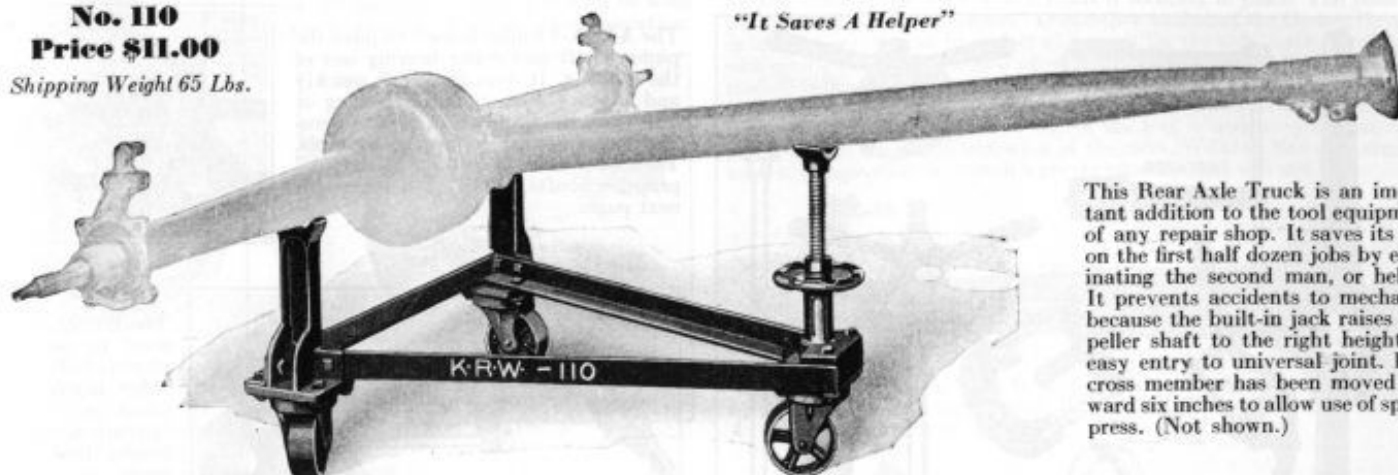
KRW Rear Axle Dollie for Models A-B-V-8 and Trucks

No. 110

Price \$11.00

Shipping Weight 65 Lbs.

"It Saves A Helper"



This Rear Axle Truck is an important addition to the tool equipment of any repair shop. It saves its cost on the first half dozen jobs by eliminating the second man, or helper. It prevents accidents to mechanics because the built-in jack raises propeller shaft to the right height for easy entry to universal joint. Rear cross member has been moved forward six inches to allow use of spring press. (Not shown.)

KRW Front and Rear Axle Stand KRW Spring Perch Bushing Driver



No. 50

Price \$23.50

F.O.B. Our Factory
Arcade, N. Y.

Shipping Weight
K.D. 230 Pounds

For
T - A - B - V - 8
Cars—Trucks
Suitable for All
Makes



For "A and T"

No. A-417

Price \$1.00

This Bushing Driver is made to remove and replace rear Spring Perch Bushings in late Model T and early Model A cars. Offset design permits it to get by the rear brake housing assembly plate. It is made of tough alloy steel, carefully machined to fit the bushing and prevent collapsing.

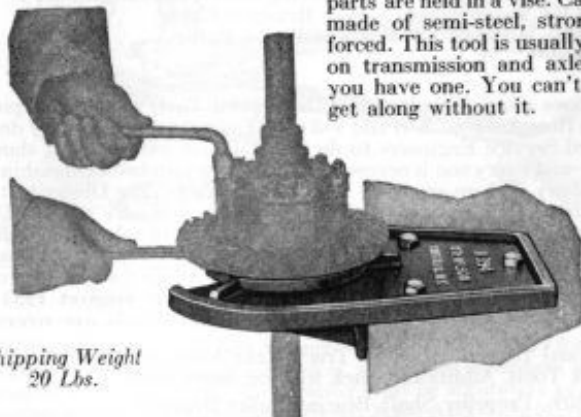
KRW Differential Housing Holder

No. A394

Price \$2.50



The KRW Differential Housing Holder handles both Car and Truck Differentials. It enables the mechanic to work most conveniently—prevents damage to the finished parts as is often the case when these parts are held in a vise. Castings are made of semi-steel, strongly reinforced. This tool is usually mounted on transmission and axle bench if you have one. You can't afford to get along without it.

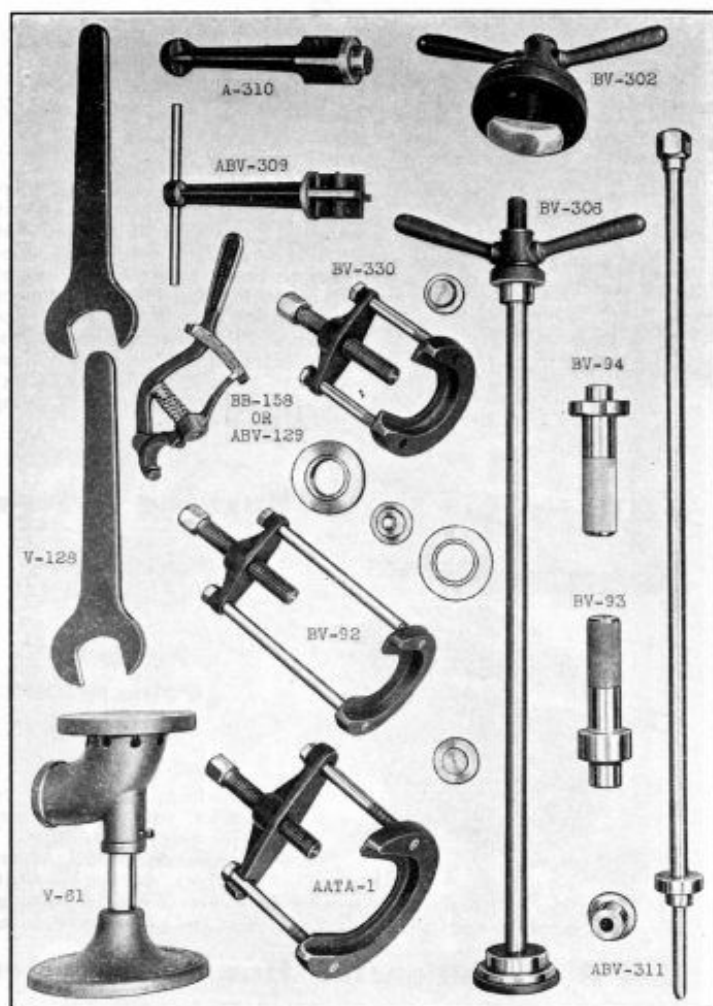


Shipping Weight
20 Lbs.

The KRW Combined Front and Rear Axle Stand has many valuable features. The main frame is a one-piece semi-steel casting. Movable jaws are of malleable iron. Hand wheel screws are protected against damage to threads, also against danger to operator. Galvanized Steel Tool and Grease pans are provided so that the floor can be kept clean. The front end has an adjustable support for both bevel and worm gear axles. Also provides a bracket for holding up the radius rods. It is ideal for all testing and repair operations on front axle assemblies. Suitable for all makes and types of axles.

**Mechanics, Send Us Your Ideas on Special Tools.
We Won't Steal Them!**

Complete Group of Rear Axle Tools Required For "B and V-8" Cars



Group 9 \$30.00

If entire lot is ordered at one time

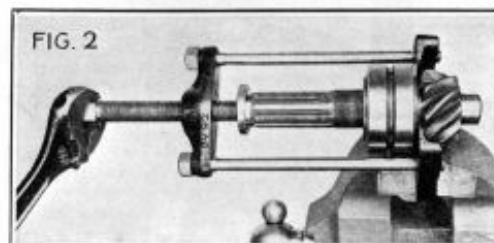
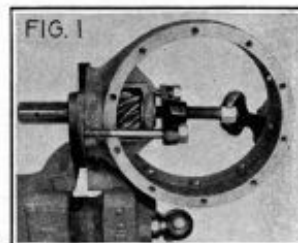
★AATA1	Bearing Puller.....	\$ 3.95
★V61	Banjo Heater for Rear Axle.....	3.00
★BV92	Pinion Bearing Remover-Placer.....	3.50
★BV93	Differential Cone Driver.....	1.25
★BV94	Outboard Bearing Driver.....	1.35
★V128	Pinion Bearing Lock Nut Wrenches.....	2.40
★ABV129	Pinion Bearing Tension Scale.....	2.25
★BV302	Axle Housing Race Puller.....	2.75
★BV306	Axle Housing Race Press.....	2.75
★ABV309	Propeller Shaft R. Bearing Sleeve Puller.....	2.25
★A310	Propeller Shaft R. Bearing Grease Retainer-Puller.....	1.50
★ABV311	Axle Housing Grease Retainer-Placer.....	2.50
★BV330	Differential Cone and Pinion Puller.....	3.75
		\$33.20

The above group includes all of the Special Tools required to properly service Rear Axles on A-B and V-8 cars. Every tool is especially designed by Ford Service Engineers to do a certain job exactly as it should be done,—and every one is necessary. The quality and workmanship is the best. Many of them are made from drop forgings. The Dealer just starting in business should order the entire group and save money. Dealers who formerly purchased the smaller group should select the additional tools required and be prepared to render "A-1" service when your customers come for it. **READ THE NEXT 3 PAGES** for full information and how to use them. See! **October 1932 also August 1933 Ford Service Bulletins** for the reasons why these tools are necessary.

Additional Tools required for Truck Rear Axles not included in Group 8 Truck Tools. Additional truck tools on pages 48-49.

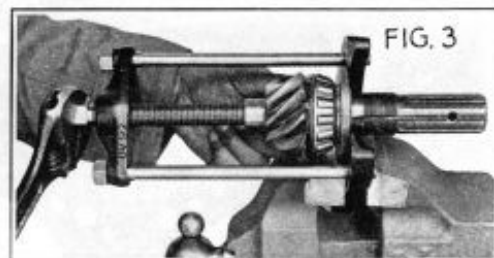
AA-309	Propeller Shaft Bearing Puller-Replacer.....	2.00
AA-310	Propeller Shaft Grease Retainer-Placer.....	1.50
AA-311	Rear Axle Grease Retainer-Placer.....	2.50
AA-334	Rear Hub Grease Retainer-Driver.....	2.25
AA-354	Truck Wheel R.B. Sleeve Puller-Replacer.....	5.00

The AATA-1 Puller is used to push the pinion shaft and roller bearing out of the housing. It does the work quickly and without damaging the bearing or distorting the Banjo—a difficult operation to accomplish without these tools. The same Puller is used on Model "A" propeller shafts, as shown at bottom of next page.



The BV-92 Press is used to push the pinion shaft out of roller bearing—an other very difficult operation without proper tool equipment.

The BV-92 Press, with special Collar, is used when re-assembling the roller bearing on the pinion shaft. Prevents damaging the roller cage. An extra collar to fit the larger 1935 bearing is included.



The BV-92 Press, with special Collar, is used again for assembling the second roller bearing cone.

The BV-94 Driver is made to exactly conform to the shape of the pinion shaft pilot bearing so that no damage will be done while driving it in place. The driver is piloted by the hole in the center of the bearing, but the driving strain is entirely on the ring or outer race. Do not attempt to install this bearing by ordinary methods or with makeshift tools, you may damage it. Just another place where the right tool is necessary to do a good job. It is important that the housing be heated when Driving Pinion Bearing Cup is installed. See Fig. 181, Page 115, 1933 Ford Service Bulletin.



The V-61 Banjo Heater will enable your mechanics to assemble "banjo" and pinion gear assembly by the same process used in production at the factory. The neck of the "banjo" should be heated in a way that will expand it uniformly so that the pinion and roller bearing assembly will drop into place against the shoulder provided, thus insuring proper meshing of the gears and freedom from noise. Driving or pressing this assembly into place should be avoided because of damage to bearings and uncertainty of proper meshing of gears. Any ordinary blow torch will do the work. (See Fig. 7).



The BV302 Axle Housing Roller Bearing Race Puller will bring them out absolutely straight without enlarging the diameter of the bearing recess.

After the Banjo has been heated, the pinion and roller bearing assembly can be lowered into place against the stop shoulder, by its own weight. It is well to wear gloves while performing this operation.

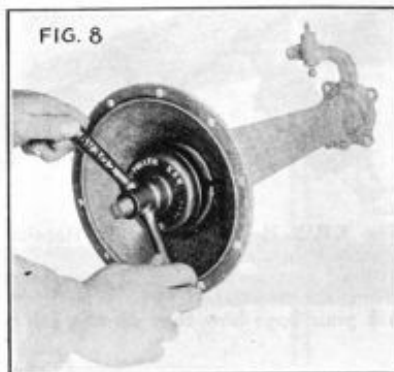


FIG. 8

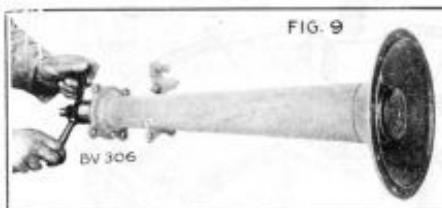


FIG. 9

The BV306 Roller Bearing Race Press draws the race squarely into position—absolutely in line with the axle shaft. Any mis-alignment of this bearing will cause noisy gears and excessive wear.

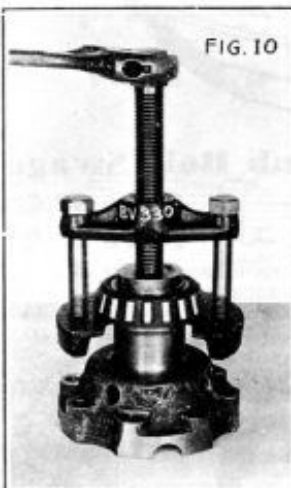
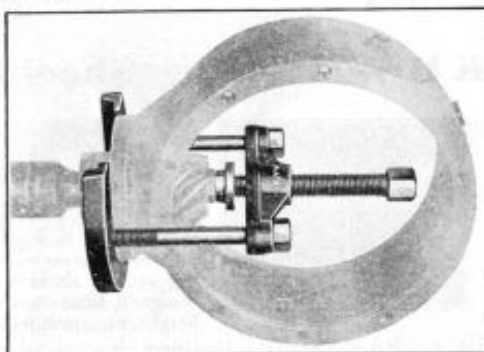


FIG. 10



FIG. 11

The BV330 Puller does three different operations—Removes the roller bearing cone from the differential housing, as shown in Fig. 10, pulls the pinion assembly from the propeller shaft, also the roller bearing off the pinion on Model "A". The BV93 Roller Bearing Cone Driver (Fig. 11) is especially recessed to fit the cone. It will not damage the sheet metal roller retainer. A long pilot guides it absolutely straight. Avoid damage and do quality work by using specially designed tools.



The No. A311 Rear Axle Housing Grease Retainer Placer does the job right. The pilot bushing is placed in the outer end of the axle housing for a guide,—then the Grease Retainer is placed in position on the specially formed collar of the tool, which holds it securely in place. The pilot on the collar "shapes and centers" the leather washer of the Grease Retainer for a correct fit and in perfect alignment for the axle shaft. The extension pilot guides the tool into pilot bushing so that when the assembly is pushed down it will seat squarely against the shoulder in the housing provided for it,—and without any damage to the Retainer. Sometimes a tap of a hammer on the outer end of the tool is necessary to seat it in place, due to the slight variation in the sizes. Without this or a similar tool, it is impossible to install a grease retainer that will not leak.



The (AA-311) Truck Tool is similar except larger and is used only with Ford Banjo type Truck Axles. Prices same as A-311.



The KRW Propeller Shaft Sleeve Puller — Replacer (No. A309 and AA309) has its place too. A quarter turn and a yank on the handle takes out this hardened roller bearing

sleeve, without damage. Reverse the operation to replace it. Without these tools mechanics often spend hours trying to remove it—and oh what-a-mess when they are finished. Save your time and money from now on, by using the right kind of equipment, designed especially for the job. The truck tool is slightly larger but operates in the same manner.

The Propeller Shaft Grease Retainer Placer (No. A310 and AA310) are all important and necessary tools. The grease retainer must be placed in position "exactly right" and without the slightest damage, otherwise the job is a total loss. The KRW Tool is correctly formed to fit the back of the retainer. The Pilot prevents damage to the leather collar. Four guides on the tool insure the retainer going straight into place and remaining tight—to accomplish the results for which it is designed. Makeshift tools usually mean damaged retainers and an unsatisfactory job. The truck tool is larger, but operates in the same way.



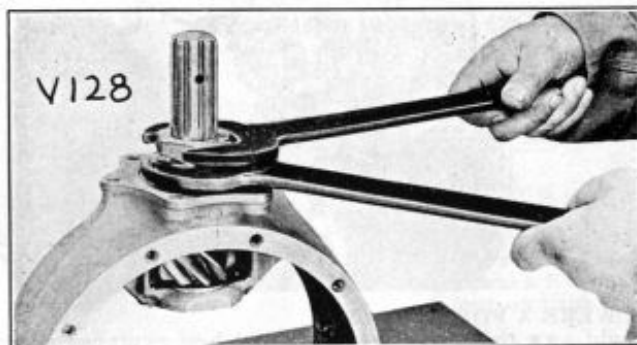
Drive Pinion Lock Nut Wrench

No. V128



Price \$2.40 Pair

Shipping Weight 5 Pounds



These Wrenches are Included in Group 9

KRW Drive Pinion Lock Nut Wrenches are made especially for the V-8 job. Drop forged from tough alloy steel, accurately machined, then heat treated to stand the strain. This bearing must be accurately adjusted as explained under Pinion Bearing Tension Scale ABV-129, otherwise excessive wear and noise will result. Good mechanics get away from the "cold chisel and drift" methods. A larger size is required for the BB Truck and is included in that group.

KRW Drive Pinion Bearing Scale

For Cars and Trucks

No. ABV-129



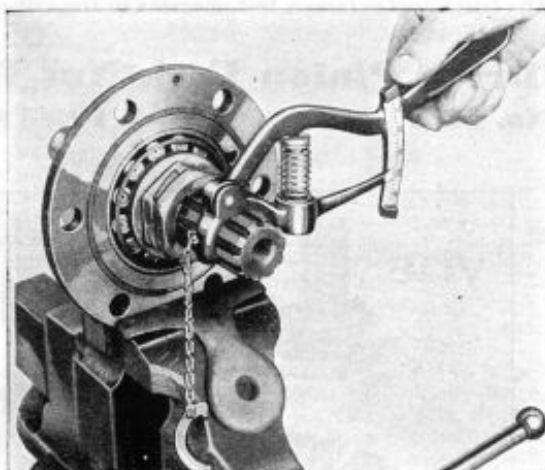
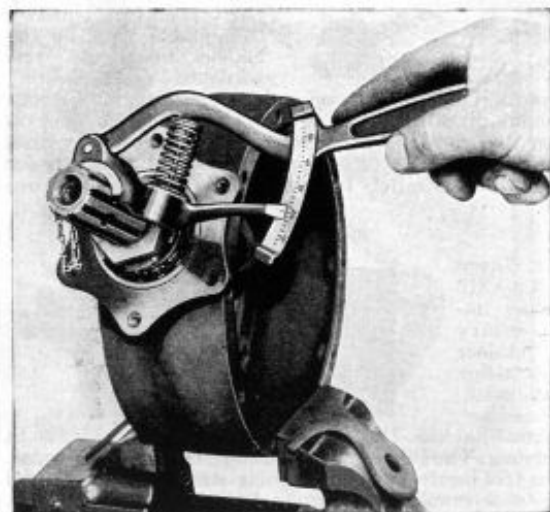
Price \$2.25



This Tool is Included in Group 9

The KRW Drive Pinion Bearing Scale measures the amount of effort required to turn the pinion after the lock nuts have been adjusted. This tool enables any mechanic to get the correct, recommended adjustment without any guesswork, thus preventing excessive wear and noisy axles. This new model handles both cars and trucks. Former number was BB-158.

SEE! Page 95 March-April-May 1933,—Page 114 August 1933, and Page 207 August 1934 FORD SERVICE BULLETINS for complete information concerning correct adjustments on various models.



IF I WERE A FORD DEALER,

I would own the smartest looking and best equipped Wrecking Car in my territory. As a piece of advertising it has no equal. Keep it clean and attractive, use it for Service calls, pickups—everything. Today's high speed Driving is producing a lot of "bad" wrecks which are mighty profitable if the Dealer is well equipped with tools and man power to handle them. If you did a good job of advertising, you will probably get more than your share of this business, then you have the first opportunity with the Customer in a disgusted frame of mind, to try and sell him a New Car. You WIN either way.

—K. R. WILSON.

Rear Hub Grease Retainer Puller

No. BV81

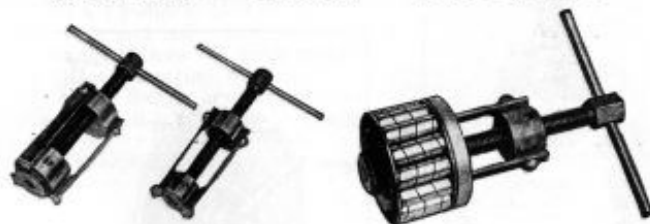
— CAR —

Price \$2.50

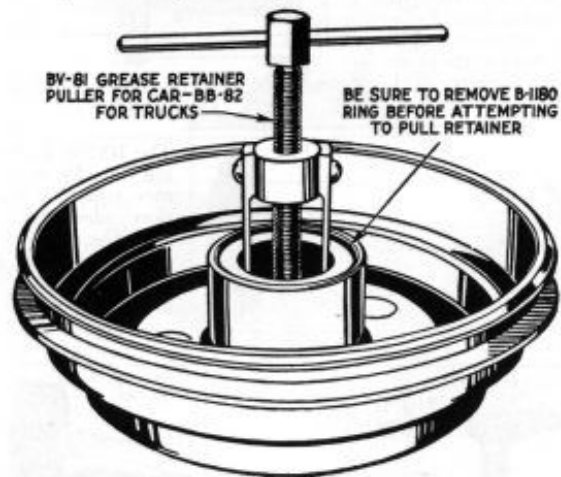
No. BB82

— TRUCK —

Price \$3.00



The KRW Rear Hub Grease Retainer Puller is the best tool ever designed for this purpose. It pulls the bearing as well as the retainer, without damage to either. It is made entirely of tough alloy steel. The prongs are drop forged, all parts heat treated and hardened to stand wear. Ask your boys how they do this job now. Then you will buy a pair.



KRW "Improved" Hub Bolt Swage

No. A408

— A-B-V8 —

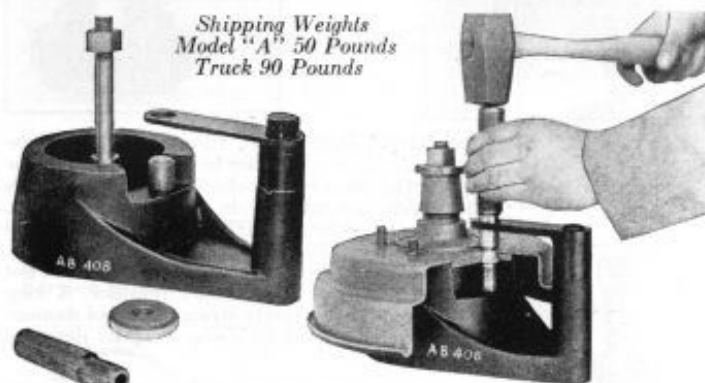
Price \$6.00

No. AA409

— AA Truck —

Price \$8.25

The KRW improved hub bolt swage is recommended for changing "stripped" hub bolts, but not for changing the entire brake drum because dial gauges and other elaborate equipment is required to insure holding the brake drum concentric with the hub. Made of semi-steel castings, anvils and upsetters of tough alloy steel.

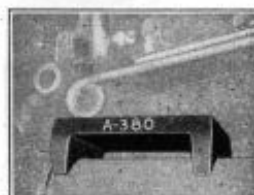


KRW "Spring Shackle" Plates

No. A380

\$1.00 Pair

Shipping Weight 5 Lbs.



The KRW "Spring Shackle" plates are inexpensive and save considerable time and annoyance while removing or replacing spring shackles. They are correctly designed semi-steel castings of the proper height, etc., and will not break or wear out

like wooden blocks. Well equipped shops should purchase several sets.

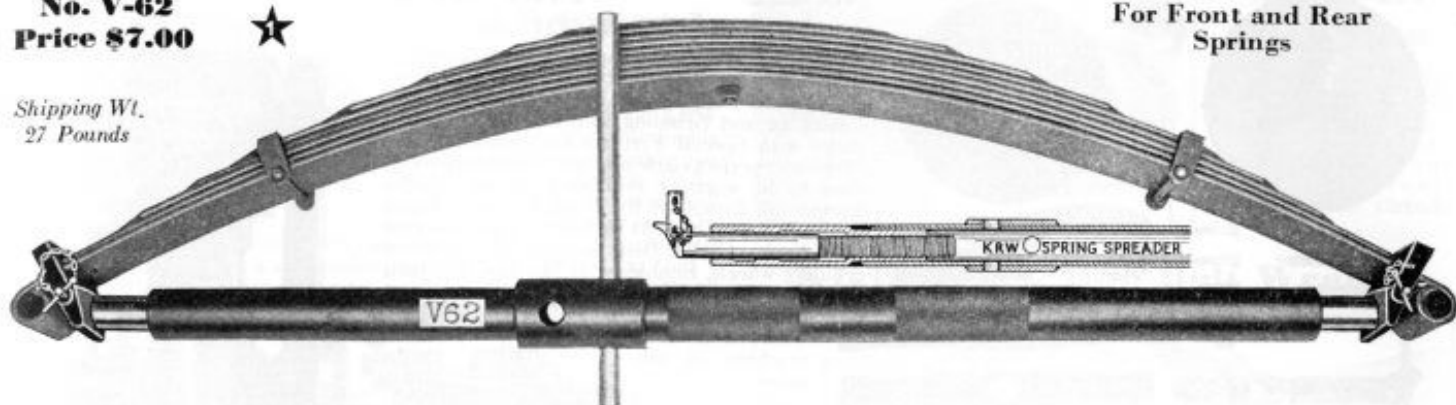
KRW "Safety" Spring Spreader for B and V-8 Cars

No. V-62
Price \$7.00



For Front and Rear
Springs

Shipping Wt.
27 Pounds



The KRW "Safety" Spring Spreader is by far the strongest, easiest operated and safest Spring Spreader on the market. It is made of heavy Seamless Steel Tubing (not pipe) 1 1/4-inch diameter by 1/4-inch wall thickness and reinforced at the center with a larger piece where it is drilled for the operating handle. This construction insures rigidity and prevents buckling. The extension shanks are drop forgings designed to fit snugly against the eye of the spring. They are heat treated, then the shaft extensions are accurately ground to size. Two long bearings in each end of the tubing prevent cramping of the threads—assuring ease of operation. Safety clips prevent the spreader from falling out of the spring and endangering the lives of mechanics. Capacity 7 tons. It is easily worth double the price we ask. No other spreader compares with it regardless of price. Not made for trucks.

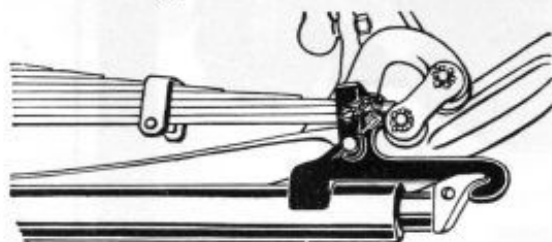
Spring Spreader Attachment

For 1935 and 1936 Front Springs

V-62B



Price \$2.25



The KRW Spring Spreader Attachment consists of a malleable casting designed to "shorten" the Spring Spreader to fit the front spring on the 1935 and 1936 cars. The spring is now much longer and stiffer than heretofore, therefore a spreader is required for removing and replacing it.

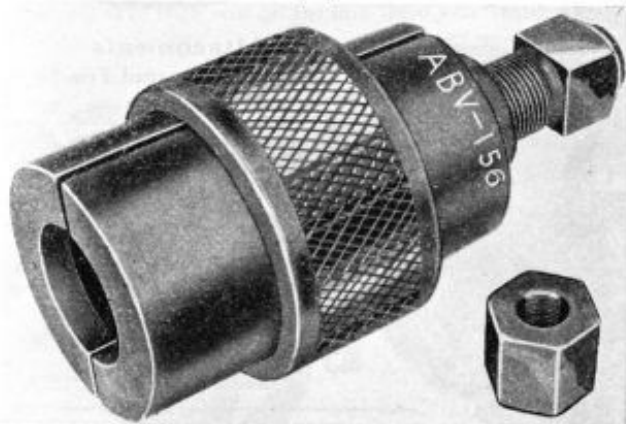
KRW "Improved" Hub Puller

For All Fords 1929 to 1936 Inc. also Lincoln Zephyr

No. ABV-156



Price \$3.50



The KRW "Quick Action" Wheel Puller takes off the entire wheel assembly. It is made entirely of drop forgings, accurately machined and

heat treated to stand abuse. A Heavy Cap protects the thread on the axle shaft against damage. A Center Hole in this hardened cap insures perfect alignment with the point on the end of the large diameter screw, thus insuring an "even pull" in the slot of the hub. We believe it is the fastest and best constructed wheel puller made.



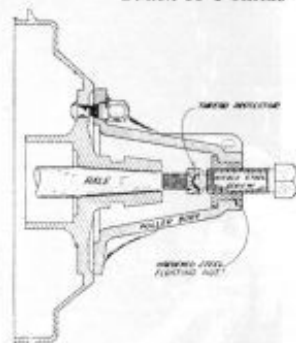
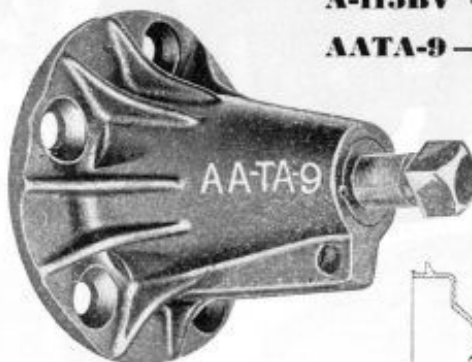
KRW Rear Wheel Hub Puller

A-115BV — CAR — \$3.85

AATA-9 — TRUCK — \$5.25

"Does Not Distort
Hubs or Brake
Drums"

Shipping Weight
Car 9 Pounds
Truck 19 Pounds



AATA-9 is also included in
"AA" Truck Rear Axle
Group on page 49

Fits All Ford Cars and Trucks 1923 to 1935 Inclusive

KRW Hub Pullers are strongly built tools,—made to endure severe service. They pull "uniformly" on each of the five studs thereby preventing distortion of the Hub Flange or Brake Drum. The body is made of malleable iron well re-inforced and ribbed for strength. The screw is extra large in diameter and is made of nickel alloy steel heat treated for toughness—a floating cap protects the threads on the end of the axle shaft. The "Floating Nut" (a special feature of all KRW Pullers) permits driving on the end of the screw, when absolutely necessary, to start "stubborn" hubs which are unusually tight or have rusted in place. No other wheel puller, regardless of price, will accomplish equal results.

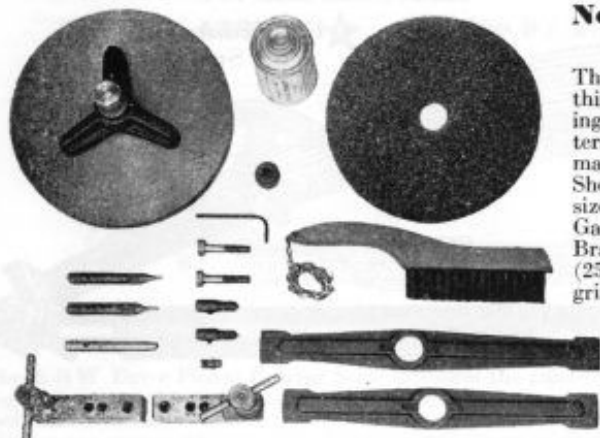
KRW Combined Brake Shoe Countersinker, Riveter, Grinder

No. 432

Price \$71.50

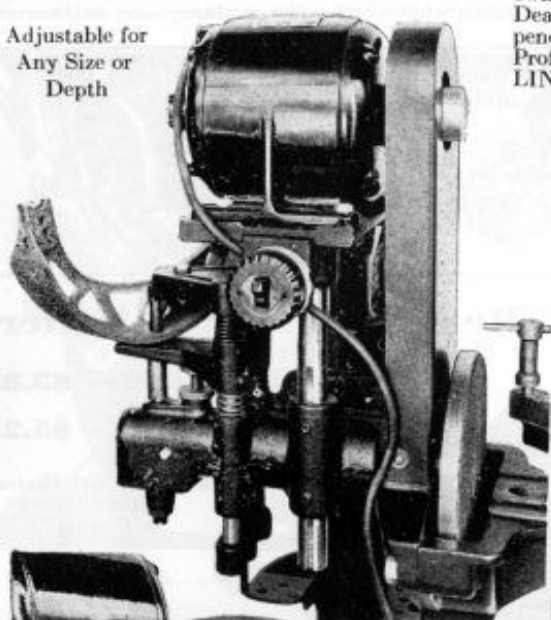
From Factory, Arcade, N. Y.

This New KRW Brake Shoe Grinder has "everything". It is Precision Built throughout. Ball Bearing Spindle. Fully adjustable for Drilling, Countersinking and Grinding, it is the Only Machine made with Special Fixtures for Grinding Ford Shoes to a perfect circle also pre-determined over-sizes to fit worn or refinished drums. Master Gauges all furnished for Ford Car and Truck Brake Shoes up to 1934 inclusive. Uses low cost (25c Each) Carbo Disk instead of expensive grinding wheels. Enables your Mechanics to turn out the highest quality of work. There is no finer machine at any price.

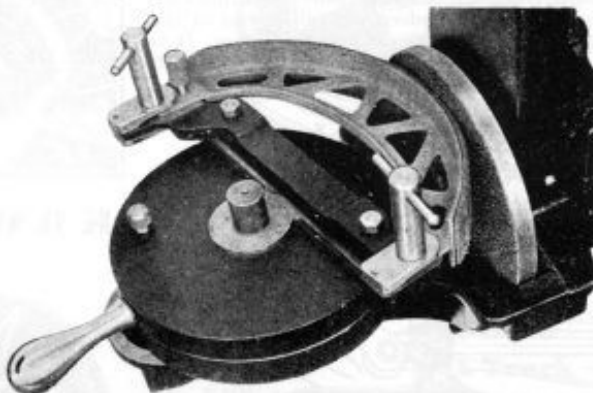


BELOW—
Drilling and Countersinking Brake Lining

Adjustable for
Any Size or
Depth



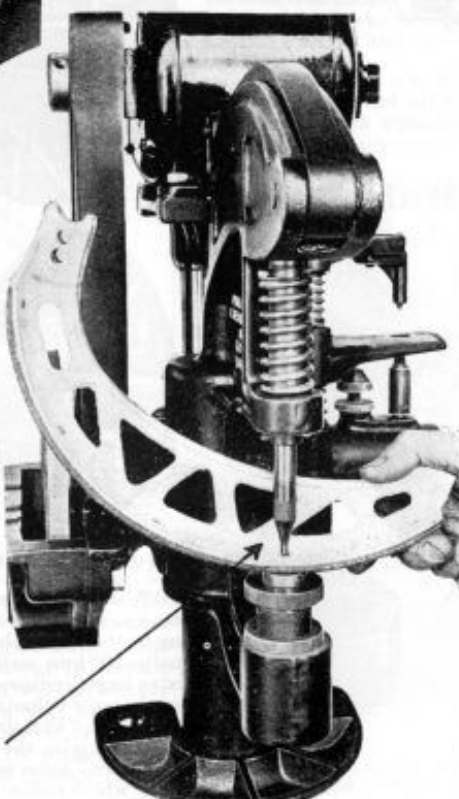
FORD DEALERS and PARTS DISTRIBUTORS should do this work in their own shops for the Smaller Dealers, Sub-Dealers, Fleet Owners and Independants. It means Better Brakes and Greater Profits. USE only GENUINE FORD BRAKE LINING. SEE! July 1935 Ford Service Bul.



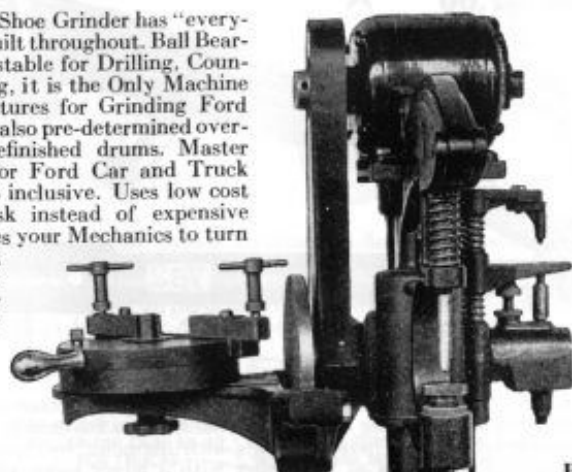
ABOVE—Grinding Lining to Perfect Circle



Riveting
Brake Lining
in place



Punching Out
Old Rivets



**Ball
Bearing
Spindle**

Equipped
with 1/4 HP
Split Phase,
60 Cycle, 110
Volt Motor

Write for
Prices on
other Cycles
or Voltages

Shipping
Weight about
300 Lbs.

Attachments
For 1935 Cars and Trucks
\$5.75 Extra



"UNIVERSAL" ATTACHMENTS

To handle nearly all sizes and Types of Brake Shoes are available for this machine. If interested write for prices, photos etc.

Brake Shoe Grinder Attachment

For A - B and early V-8



No. BV-383

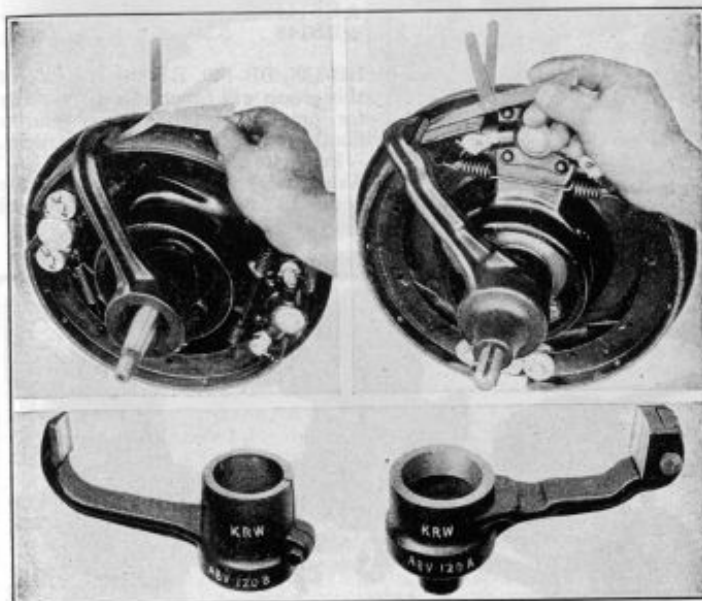
Price \$3.75

If you own an Old Style KRW Brake Shoe Grinder this double cam attachment will enable you to handle the 11-inch Brake Shoes used on B and early V-8 cars, but due to change in design

of brake shoes used on 1934-1935 cars we are unable to make a satisfactory attachment, at a reasonable price to handle them. So that a new and better Brake Shoe Grinder has been built complete with all attachments to handle all Ford cars and trucks. SEE DESCRIPTION and DETAILS of IMPROVED MACHINE.

★ KRW Brake Shoe Gauge

No. ABV117—(Front) } Price \$5.50 Pair
No. ABV118—(Rear) }



KRW Brake Shoe Gauges are simple, accurate and easy to use. Ordinary mechanics can turn out "perfect" brake jobs by checking the shoes for roundness, high spots and proper clearance before the brake drum is placed in position. Cut-away or skeleton drums have been used for this purpose in some of the better shops, but they are too slow and unhandy. These gauges handle both A, B and V-8 Models. An interlocking shoe is provided to make up the difference in diameter. They can be depended upon to save you time on every job, by doing it right the first time, instead of experimenting by the "cut and try" process.

Safety at high speeds makes perfect brakes a necessity! The price is so low you will save their cost on the first three jobs. Order a pair today.

KRW Truck Hub Bench Plate

No. AB-427

Price \$2.50



This Bench Plate is especially designed for holding AA and BB Truck Hubs while changing brake drums or hub bolts. It prevents damaging the threads.

KRW Truck Hub Bolt Wrench

No. AB-36

Price \$2.20

The KRW Truck Hub Brake Drum Wrench is especially designed for removing or replacing truck hub bolt nuts when the threads are stripped or the brake drums are changed. It's a real "he man" wrench. Made from drop forgings to insure dependable service. We recommend the use of a Bench Plate (shown above) to save time and avoid damage to threads. KRW Tools will save time and make money for you.



KRW Brake Spring Tongs

No. V-173

Price \$1.50



Shipping Weight 2 Pounds

The KRW Brake Shoe Tongs will save a lot of valuable time and "cussing" if used to install brake shoe springs. They are drop forged from Vanadium Steel. Have large capacity and will work satisfactory on practically all makes of cars equipped with internal brakes. The ends of the handles have different forged notches—one end slips upright springs into position on the studs, the other end removes them easily. 13-inch handles give plenty of leverage.

KRW Shoe Gauges for Trucks



No. BB-157 (Set of 3) \$8.75



KRW Brake Shoe Gauges are just as necessary for trucks as for cars. They enable any average mechanic to check the Brake Shoes for concentricity, maximum braking surface and proper clearance. With this information all guesswork and experimenting is eliminated. These Semi-Steel Castings are normalized to relieve strains by heat treating then accurately machined to Master Gauges.

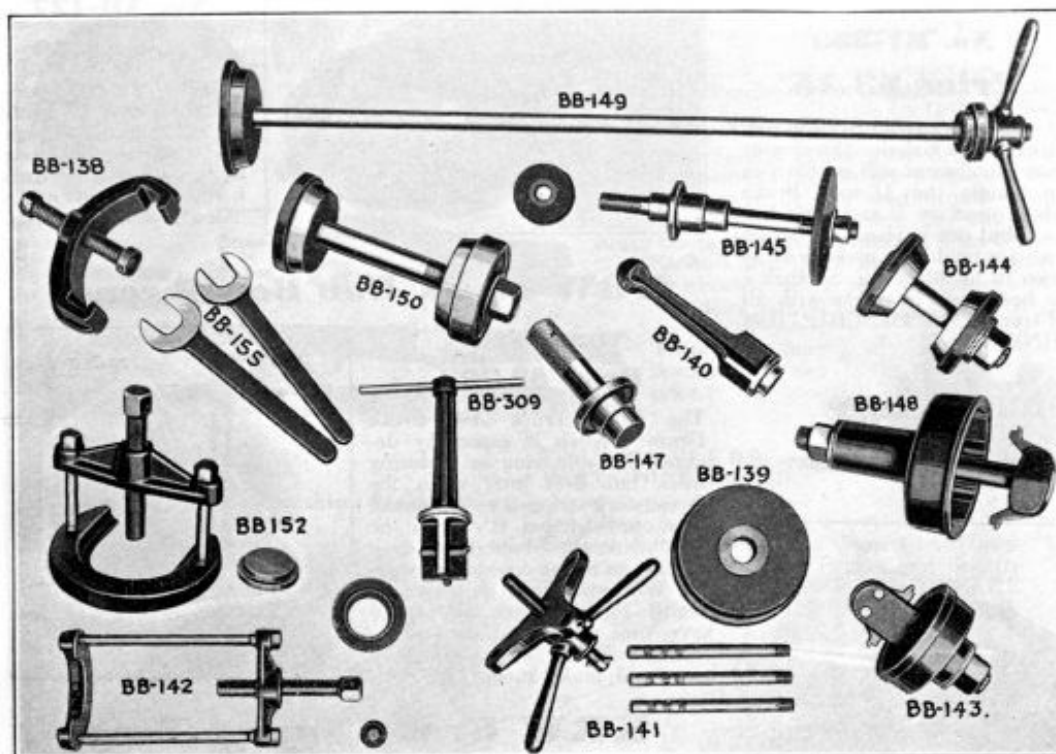
SEE! Page 97 March, April, May 1933, also Page 237 November 1934 Ford Service Bulletin for complete information.

FRONT BRAKE

3/4 FLOATING REAR AXLE BRAKE

FULL FLOATING REAR AXLE BRAKE

KRW Special Timken Axle Tools for the "BB" Truck



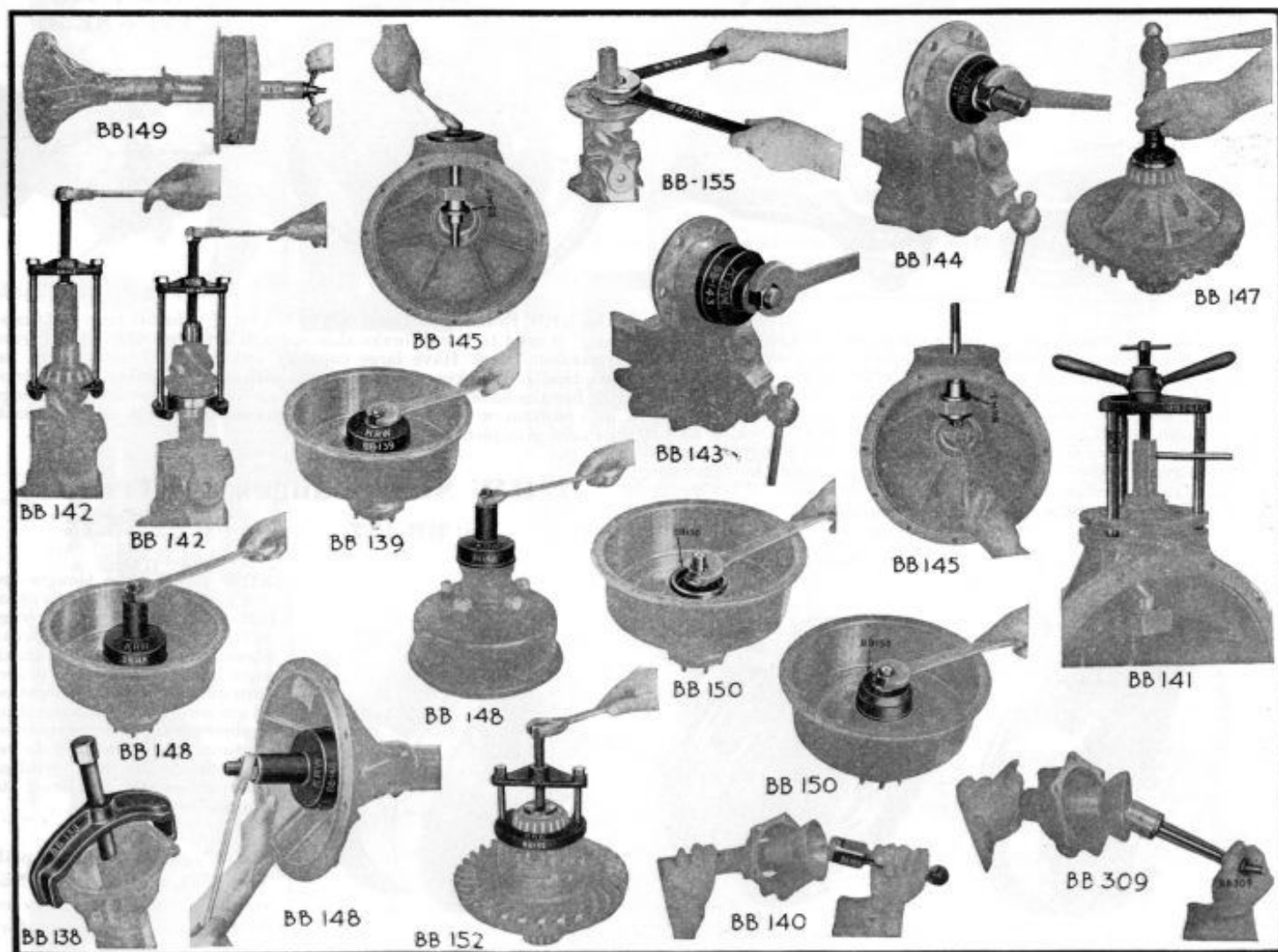
Group B (16 Tools)

★ Price \$38.00

Every Ford Repair Shop needs this complete group of specially designed tools to quickly and accurately service the "full floating" axles used on the new Ford trucks. Every tool is designed by Ford Service Engineers to do the job exactly as they want it done. The pictures below show how and where each of these tools are used—how they simplify the work of mechanics and enable them to turn out "perfect" jobs.

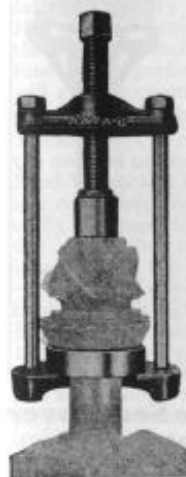
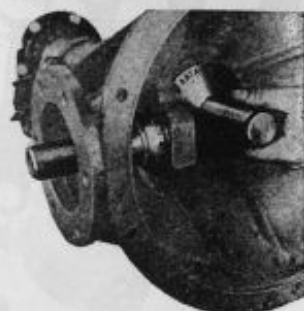
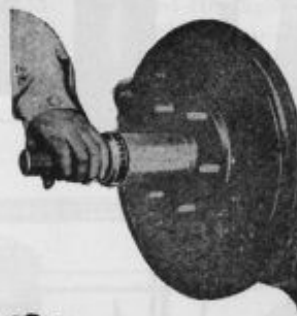
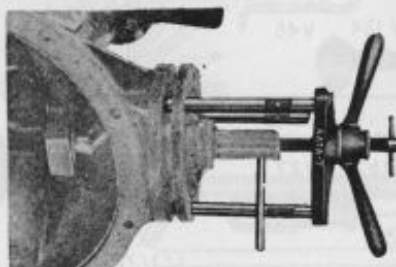
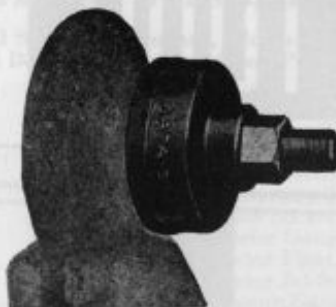
★BB138 . \$1.60	★BB147 . \$1.90
★BB139 . 1.00	★BB148 . 3.75
★BB140 . 1.50	★BB149 . 2.75
★BB141 . 2.85	★BB150 . 2.75
★BB142 . 3.75	★BB152 . 4.25
★BB143 . 2.95	★BB155 . 2.50
★BB144 . 2.75	★BB309 . 2.25
★BB145 . 3.50	Total \$40.05

BB-138, BB-140, BB-141, BB-309 of this group will function satisfactorily for previous type of three-quarter floating axle used on the "AA" trucks, —but none of AATA Group of "AA" Axle Tools can be used to service the new "BB" Axle. See! July 1934 Ford Service Bulletin.



K R W Special Tools for "AA" Timken Truck Axle

SEE AXLE
GROUP
FOR CAR.
PAGE 42



AATA-1
\$3.95



AATA-5
\$2.95



\$3.10

AATA-10



AATA-12
\$3.75



AATA-2
\$1.35



AATA-9 ★
\$5.25



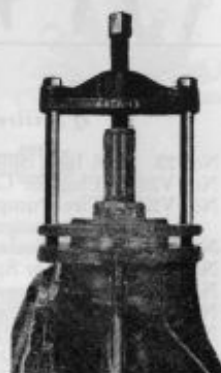
AATA-7

\$2.50



\$3.00

AATA-6



AATA-13
\$2.60



\$2.00

AATA-16



AATA-8
\$.50



AATA-4
\$1.50



AATA-3
\$1.75



AATA-14
\$1.75



AATA-15
\$1.80



AATA-11
\$1.85



Group AATA

Price \$39.00

For Complete Set as Shown

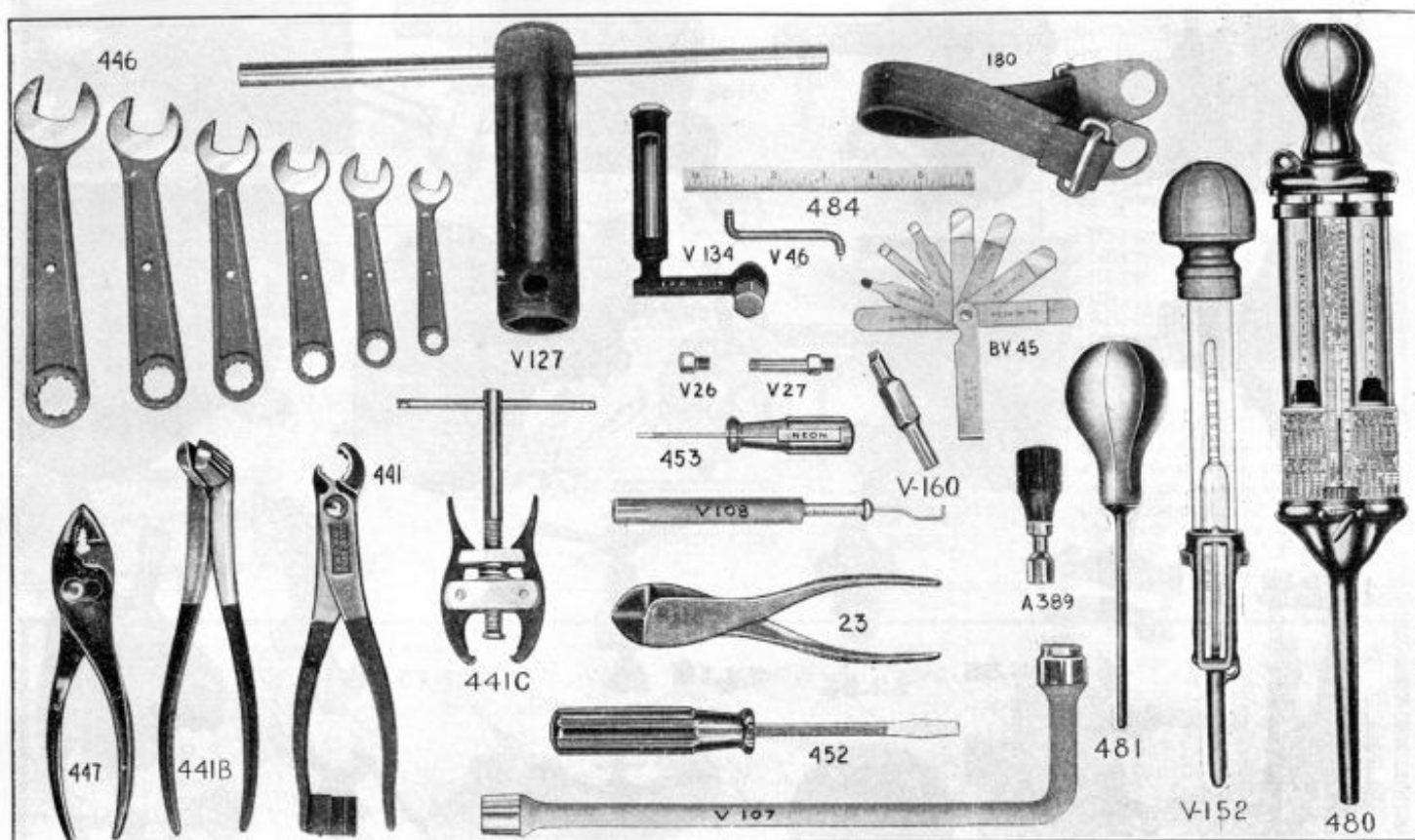
This Group includes all necessary Tools for servicing Model "AA" Truck, Timken Rear Axle, except wrenches. Every Tool has been designed by Ford Service Engineers to do the job quickly and accurately. Most of them include some parts made of drop forgings and malleable castings to obtain maximum strength and long life. Sold in complete sets or individually at slightly higher prices. Every tool is Important and Essential.



TUNE-UP TOOLS

SUGGESTED TOOLS FOR USE WITH FORD LABORATORY TEST SET

SEE! October 1934 and April 1935 Ford Service Bulletins



Group 6 Price \$25.00

If Entire Lot is Ordered at One Time

No. 482 Two Front Fender and One Seat Cover are Included in Above Group

No. 23	6 Inch Side Cutter Pliers.....	\$ 1.00
No. V26	Plug for Checking Fuel Gauge.....	.35
No. V27	Tire Pump Attachment for Cleaning Fuel Gauge Line.....	.60
No. BV45	Step Feeler Gauge (See Page 8).....	1.40
No. V46	Breaker Spring "Offset" Screwdriver.....	.50
No. V107	Intake and Exhaust Manifold Wrench.....	1.25
★ No. V108	Breaker Spring Tension Tester.....	1.50
No. V127	Spark Plug Wrench.....	1.25
★ No. V134	Carburetor Float Level Gauge.....	2.50
No. V152	Shop Size Hydrometer, with Thermometer.....	1.00
No. V160	Carburetor Drain Plug Screwdriver and Jet Wrench.....	.60
No. 180	Battery Carrier (3 for \$1.00).....	.50
No. A389	Generator Socket Wrench.....	.35
No. 441	Kit of (3) Battery Tools (See Page 57).....	3.00
No. 446	Set (6) Vanadium Steel Wrenches.....	.90
	(Open end: $\frac{7}{16}$ - $\frac{1}{2}$ - $\frac{9}{16}$ - $\frac{3}{4}$ - $\frac{7}{8}$ - $\frac{15}{16}$)	
	(Socket $\frac{5}{16}$ - $\frac{3}{16}$ - $\frac{1}{2}$ - $\frac{9}{16}$ - $\frac{5}{8}$ - $\frac{3}{4}$)	
No. 447	6 Inch "High Grade" Pliers.....	.60
No. 452	Insulated Screwdriver, 4" sq. blade.....	.60
No. 453	Insulated Headlight Screwdriver and NEON SPARK PLUG TESTER.....	.50
No. 480	Radiator Solution Tester.....	3.75
No. 481	Self Leveling Battery Syringe.....	.50
No. 482	Two Fenders and One Seat Cover (See Page 59).....	4.00
		\$26.65



See page 59 for full description of New Type Fender Covers

SEE! April 1935 Ford Service Bulletin

This group of Special KRW Tools, illustrated above, is recommended for use in conjunction with your FORD LABORATORY TEST SET. Provisions have been made in the Cabinet to accommodate them. The efficiency of your Test Set depends to a certain degree on the equipment you have to use with it. All of these tools are necessary.

Let us rebuild your KRW Distributor Timing Jig to handle FORD V8 and The Lincoln Zephyr

There is no need to buy a complete new Fixture. Let us bring your present KRW Timing Jig up-to-date by rebuilding, refinishing and incorporating the latest improvements including the new Combined Ford and Lincoln Dial, new Driving Hub, and Extension Wire with clip, as illustrated on page 53. If a new bulb or batteries are required, they will be included,—all for \$3.50. Ship Fixture direct to our Factory—K. R. WILSON, ARCADE, N. Y.—Transportation prepaid, and it will be rebuilt and returned to you within 3 days after receipt of same. DO IT NOW—AVOID THE RUSH.



Group 7 "Tune Up Tools" \$25.00

For Small Dealers, Fleet Owners, Independent Service Stations

Recommended by Ford Service Engineers, Illustrated in Ford "Engine Tune-Up" Films and Booklet, "Making Good Performance Better."

Mechanics!

If you have not already received a copy of this booklet entitled "Making Good Performance Better," be sure to get one from your nearest Ford Dealer or Parts distributor. It will show you how to tune Ford V-8 motors to get Championship performance.

★No. V126	Distributor Timing Fixture (Ford and Lincoln) ..	\$ 7.85
★No. V108	Breaker Spring Tension Tester	1.50
No. V46	Breaker Spring "Offset" Screwdriver .....	.50
No. V127	Spark Plug Wrench	1.25
No. 441	Set (3) Battery Tools	3.00
No. A389	Generator Socket Wrench .....	.35
No. BV45	Step Feeler Gauge	1.40
★No. V134	Carburetor Float Level Gauge—6-Inch Scale	2.50
No. V160	Carburetor Jet Socket Wrench .....	.60
No. 112	Oil Pressure Gauge	2.90
No. 429	Compression Gauge	4.75
No. 453	Insulated Headlight Screwdriver and Neon Plug Tester .....	.50

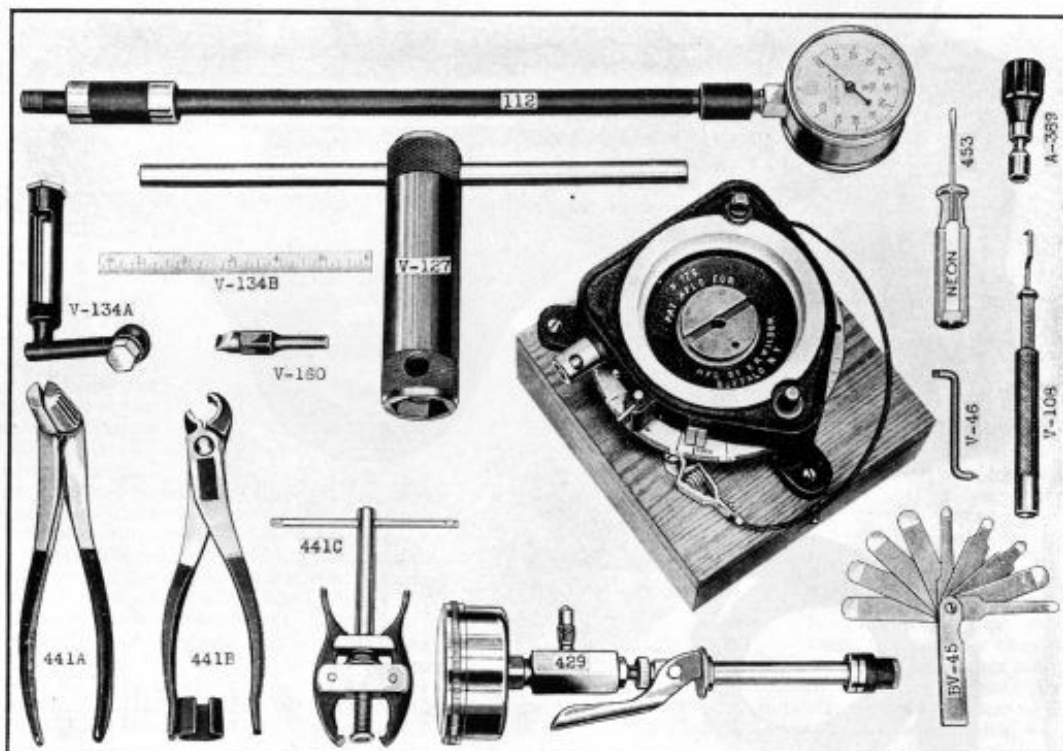
\$27.10

This Booklet Says:

Championship performance is not an achievement which belongs to racing cars alone. It is the absolute right of every Ford V-8 owner—for it is built into every Ford car. The function of service is to maintain the quality and performance. If Ford mechanics everywhere do their work in such fashion that this function is performed, V-8 owners will get the championship performance to which they are entitled.

Mechanics! You can quickly restore the original power and "pep" of any Ford V-8 motor, if in good mechanical condition, by using KRW specially designed tools and following the procedure recommended and illustrated in the Ford Service Film—"Engine Tune-up," also in the booklet "Making Good Performance Better." Each and every one of the 15 tools in this group plays an important part in making the analysis and adjustments necessary to secure proper co-ordination of the fuel and ignition systems. Guess work is entirely eliminated.

Place Orders for Ford Laboratory Test Sets with Ford Branch

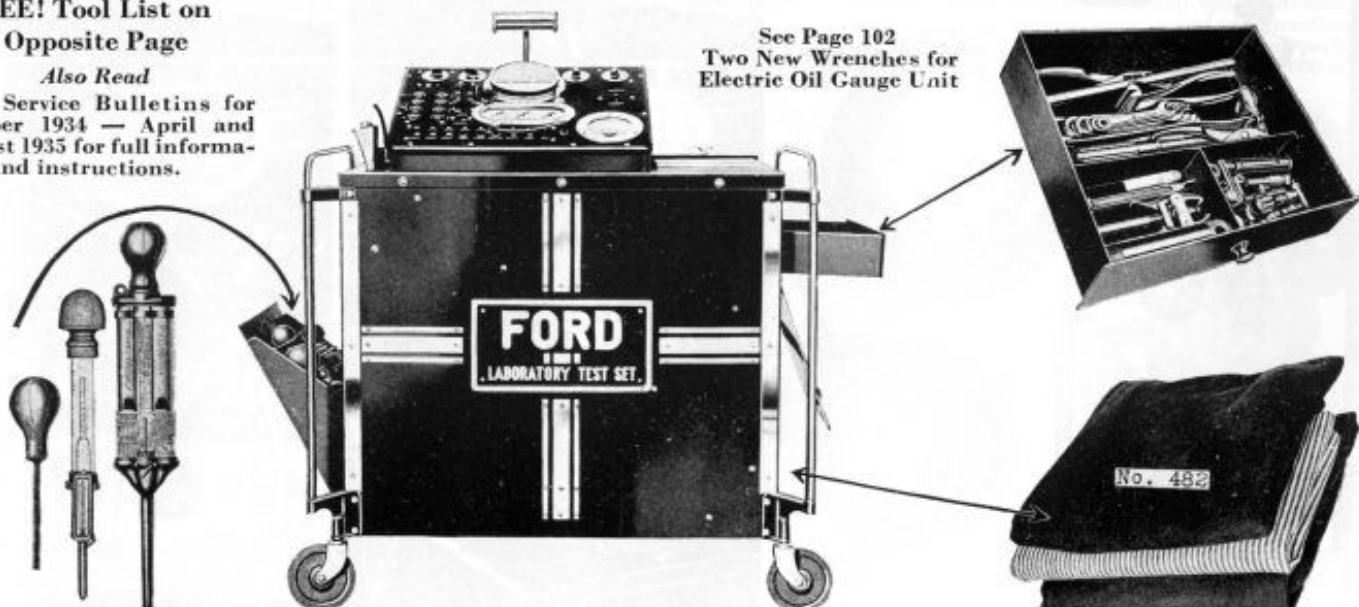


SEE! Tool List on Opposite Page

Also Read

Ford Service Bulletins for October 1934 — April and August 1935 for full information and instructions.

See Page 102 Two New Wrenches for Electric Oil Gauge Unit



KRW "Gang Gauge Set" FOR MOTOR TESTING

For Checking Oil Pressure,
Cylinder Compression,
Carburetors and Fuel Pumps

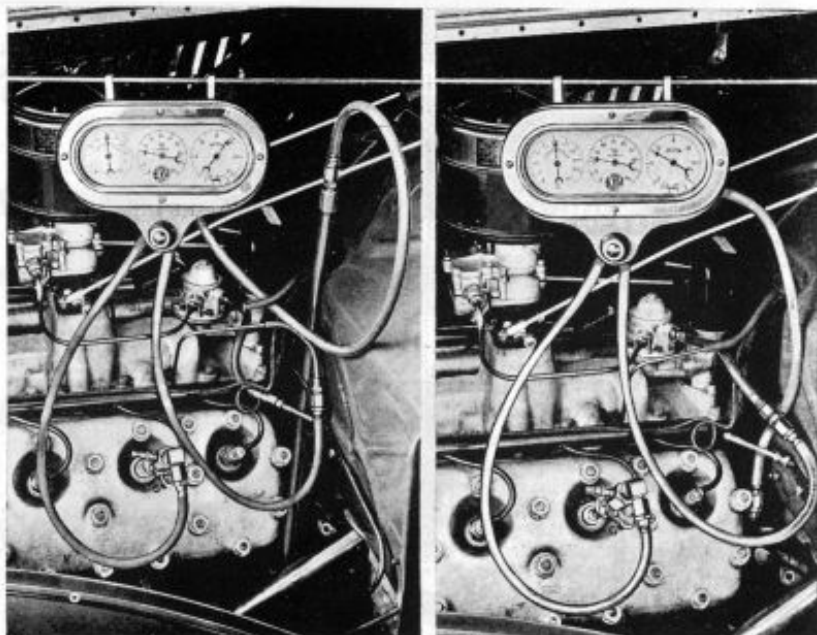
No. 500
Price \$9.75

For Small Dealers, Sub-Dealers,
Authorized Service Stations,
Fleet Owners and Independent
Repair Shops



The KRW Portable "Gang Gauge Set" illustrated above is exactly the same as built-in to the Ford Laboratory Test Set shown on page 51. This Unit consisting of three individual Gauges mounted on one panel has proven so satisfactory for diagnosing motor troubles and saves time wasted tearing down motors to obtain the same information (aside from Electrical), that we now furnish it as a complete Test Unit, mounted in a neat, cast aluminum Case finish-

ed in black, wrinkled finish, baked-on, enamel.—Together with all necessary equipment and fittings as shown below for making Tests No's. 2-6-9-11-12 described in October 1934 Ford Service Bulletin for FORD LABORATORY TEST SET. An extension Oil Pipe with flexible joint makes it self aligning and saves several valuable minutes on Oil Pressure tests, is included. The Outfit is High Grade, Well Finished and Fully Guaranteed. We have added only a very small profit to actual manufacturing cost to make it available at this extremely low price to,—Small Dealers, Sub Dealers, Authorized Service Stations, Fleet Owners, Independent Service Stations and Individual Mechanics. A Varnished Hard-Wood carrying Case can be supplied at \$1.50 extra. ALL FORD DEALERS ARE EXPECTED TO HAVE THE COMPLETE FORD LABORATORY TEST SET. See page 102 for Special Oil Gauge Wrenches.



KRW Distributor Timing Fixture for Ford V-8 and Lincoln Zephyr

★ **No. V-126**
Price \$7.85

Shipping Weight
5 Pounds

"The"
Most
Valuable
Tool We
Have
Ever
Designed"
—K. R. W.

Eliminates all guesswork and time wasted checking and testing cars on the road. Any mechanic will quickly understand how to operate it and get definite, pre-determined results. It is shipped complete with dry batteries and bulb ready to operate when received. **READ ABOUT IT** in the Ford booklet entitled, "Making Good Performance Better" also SEE November 1933 and August 1934 Ford Service Bulletins for complete information and instructions.

IMPORTANT

We will rebuild old KRW Distributor Timing Jigs to include this new dial for Lincoln Zephyr for \$3.50

See Page 50
for details



Use No. V-46 Off-Set Screw Driver to loosen or-tighten the breaker point screw clamp.



Use No. V-108 Breaker Spring Tension Scale for checking spring tension, at the points.



When correctly timed light will go out as line on dial passes mark on frame.



Advance spark by loosening screw and moving clamp to the left until light goes out.



Use BV-45 Step Feeler Gauge for measuring and adjusting Breaker Points.

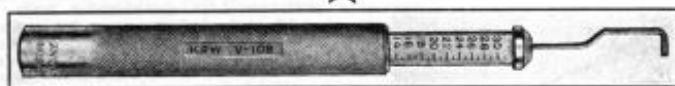
The KRW Timing Fixture consists of a very accurate jig for holding the distributor in place while various service operations are performed. An accurately "indexed" disc wheel turns the rotor for checking the opening and closing of breaker points. As the circuit is closed a small light flashes, indicating the correctness of the timing as the marks on the disc wheel coincide with one on the fixture. It automatically establishes the four degree initial spark advance, restoring the original pep, power, speed and smooth operation so far as ignition is concerned. For peak performance this operation should be done every 10,000 miles.

KRW Breaker Spring Tension Scale

No. V108



Price \$1.50



This new KRW "Breaker Point" Spring Tension Scale is made to accommodate both the old style and the new type of breaker springs now being used. It is calibrated in 2 oz. divisions from 14 to 30 oz. Complete information and instructions for use can be found in the following Ford Service Bulletins—Page 105—Fig. 167 March-April-May 1933, Article "F". Page 126 also Page 128 September—October 1933, Article "C"—November-December 1933 issues. SEE! Operation picture on page 53.

Breaker Point Adjustment Screw-Driver

No. V46—50 Cents

The KRW Double End, Off-set Screwdriver is designed especially for adjusting breaker points on V-8 Distributors. It is made of tough alloy steel. One end is crosswise—the opposite end lengthwise so that the screw can be turned completely around by quarter turns, as shown in picture in opposite column. The space is so limited that no other type of screwdriver can be used. Every mechanic needs one for "tune-up" work.



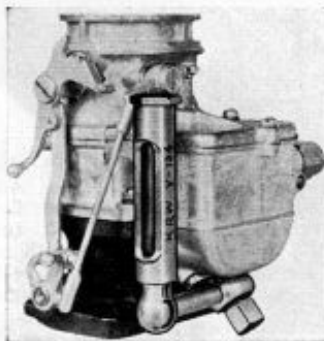
KRW Float Level Gauge

No. V134 ★ Price \$2.50

Including a Six-Inch Steel Scale

The KRW Float Level Gauge permits checking of the gasoline level under actual operating conditions. This Gauge is attached to the drain plug hole and the engine is permitted to idle. The fuel level in the carburetor bowl is duplicated in the glass tube of the Float Level Gauge and the measurement can be made from the surface of the gasoline in the glass tube to the front bowl cover gasket. This measurement should be not less than $\frac{1}{8}$ inch, nor more than $\frac{1}{2}$ inch. A six-inch steel rule (not shown) is included for convenience in making accurate measurements.

Full directions are given on Page 140 Ford Service Bulletin for January-February, 1935.

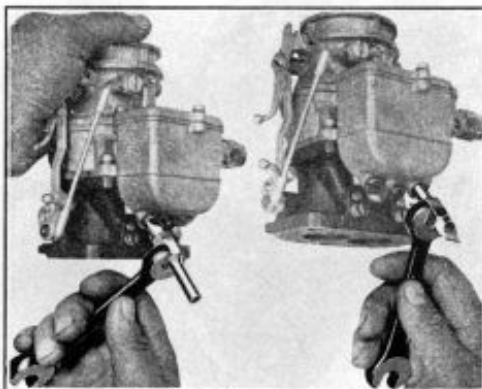


KRW Carburetor Jet Wrench

No. V160

60 Cents

Carburetor Jets are easily removed or replaced with the KRW Special Jet Wrench. It is possible, when using dirty gasoline, for small particles of dirt, etc., to enter and become wedged in the various metering orifices which restricts the flow of gasoline and results in a lean gasoline-air mixture. The remedy is to remove the Jets and clean them with compressed air to remove any foreign substance that may have lodged in them. Full instructions are given on Page 141 of January - February, 1934 Ford Service Bulletin.



KRW V-8 Carburetor Wrenches

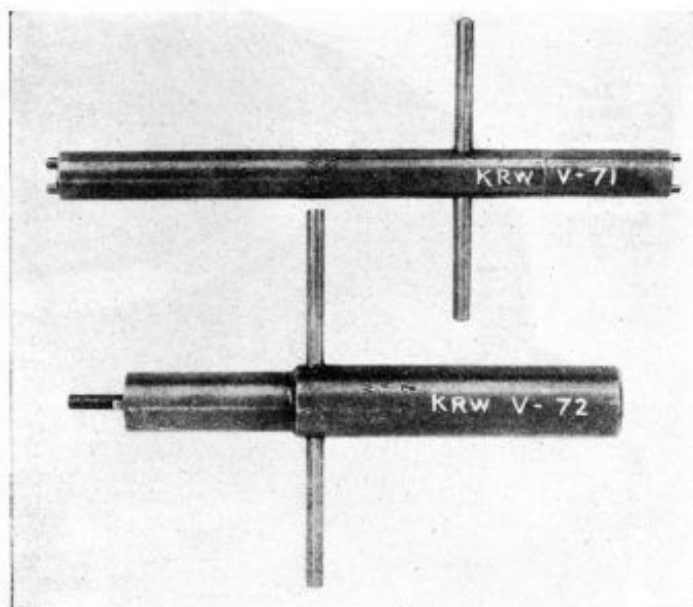
No. V71

Price 75 Cents

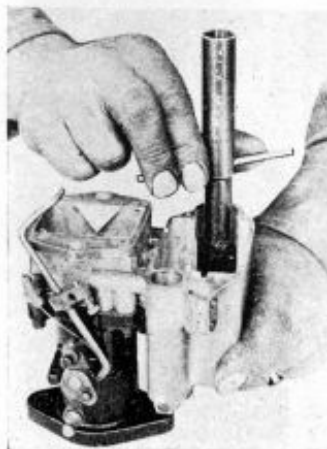
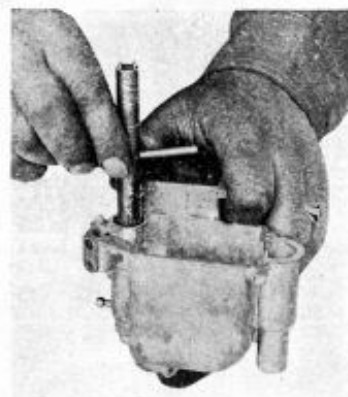
No. V72

Price 85 Cents

Used on 1932 and 1933 Models



This pair of Special Wrenches will enable your Mechanics to quickly repair and adjust 1932-1933 V-8 Carburetors. Sometimes carburetors become clogged from dirty gasoline and other accumulation, therefore must be taken apart and thoroughly cleaned to insure satisfactory operation. They are often damaged or thrown out of adjustment by using make-shift tools. Ford Dealers will win customers praise by being equipped to do this job quickly and efficiently. These tools are well made and not to be confused with cheaper tools offered by peddlers. SEE! September-October 1932 Ford Service Bulletin for full instructions how to repair and adjust this type carburetor for Maximum performance and mileage efficiency.



K R W "Zenith" Socket Wrench No. A359 Price 50 Cents



The KRW Double End Socket Wrench for removing and replacing Ford-Zenith Carburetor Jets is an important tool and should be included in the Tool Kit of every Mechanic. This type Carburetor was used on A and B Cars only. Ford Dealers should give some attention to Fuel Economy, Smooth Running, Maximum Power and Speed. Very often slight changes in carburetor adjustments will work wonders.

Fuel Pump Diaphragm Tool

No. BV96
Price \$2.50
For "B-V-8 and 40"



See Ford Service Bulletin December 1932—Page 87 for full instructions.

This tool will be appreciated by mechanics who have tried to do the job without it. Fig. 140 in the Ford Service Bulletin explains why it is necessary to hold the diaphragm discs absolutely flat and in perfect relation to the "flat" on the pull rod, while being assembled.

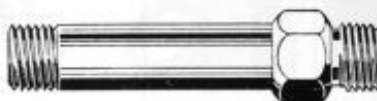
V-26 Plug for Checking Fuel Gauge V-27 Tire Pump Attachment for Cleaning Fuel Gauge Line

No. V-26

Price 35 Cents

No. V-27

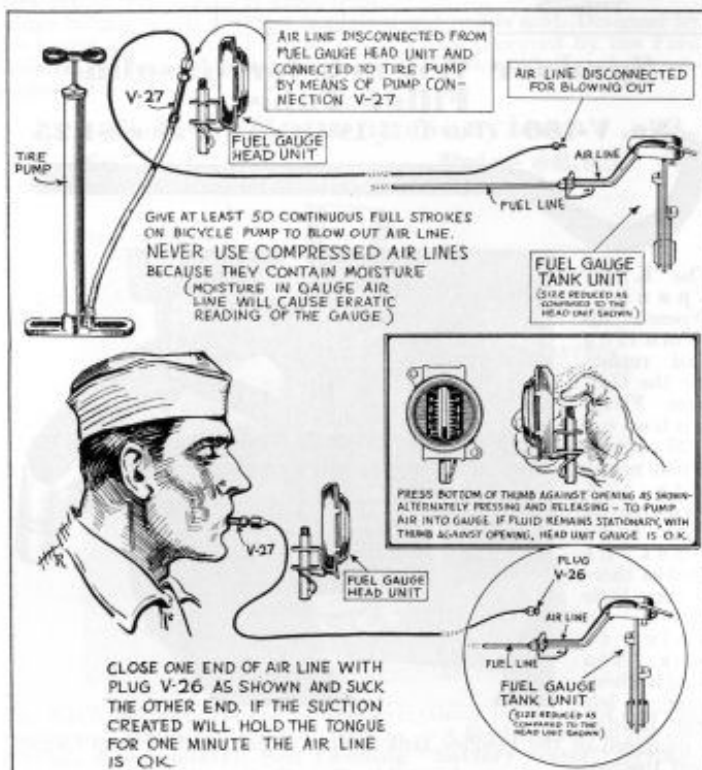
Price 60 Cents



PUMP CONNECTION V-27



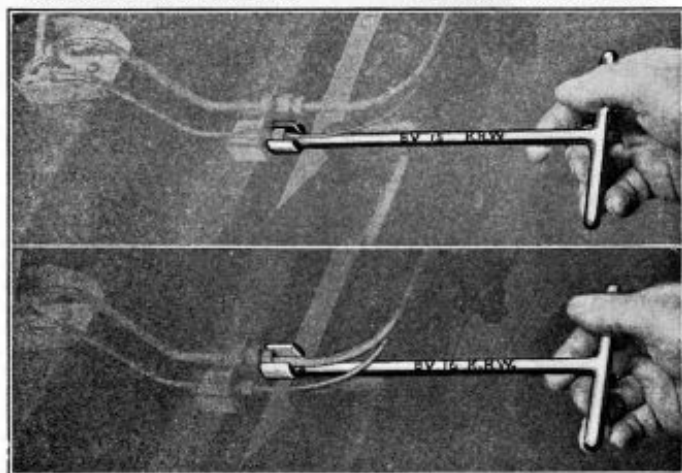
PLUG V-26



Gasoline Gauge Wrench Gasoline Line Wrench

No. BV-15 and 16

Price \$1.75 Pair



The KRW Gasoline Line and Gauge Wrenches No. BV-15 and BV-16 are designed especially for the operations illustrated above and on the next page. No ordinary type wrench can be used to reach these connections. The BV-15 fits the Connection on the Gauge also the Vacuum line on the 1932 and 1933 Distributors. Both wrenches are drop forged from tough alloy steel, then accurately "milled" to close dimensions then heat treated and tempered to stand hard service. Save hours of time usually wasted trying to use ordinary wrenches.

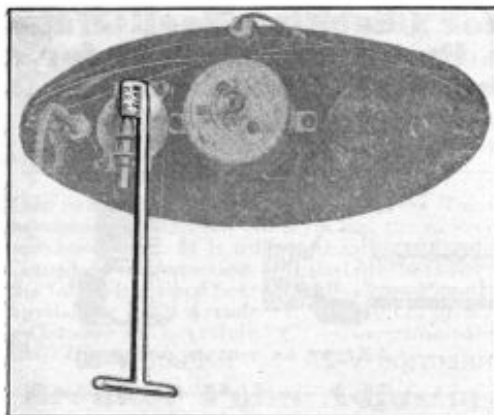
Manifold Risers

No. V-151
Price \$8.25 Set

Shipping Weight 27 Pounds
The KRW Manifold Risers when used in connection with a Model 18 Intake Manifold which has been sawed off at both ends, provides an opportunity to inspect and check the valve action with the engine operating under normal conditions. You need this outfit. Specify for single or dual manifold.



See July 1934 Ford Service Bulletin.



*Continued from
previous page*

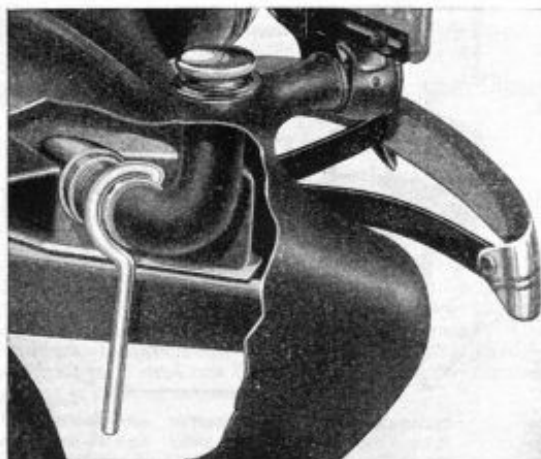
This picture shows how this wrench is used to remove or replace the gasoline gauge connection from the back of the instrument panel.

Spanner Wrench for Gasoline Filler Tube

No. V-166 (For 1935-1936 Cars) Price \$1.25

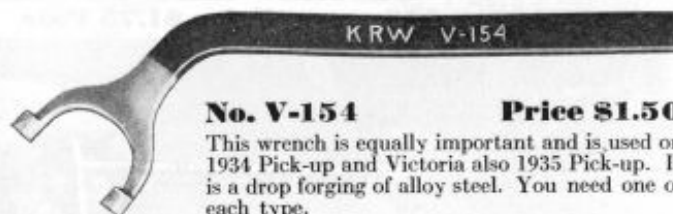


The KRW Spanner Wrench for removing and replacing the Gasoline Filler Tube on 1935 cars is a real necessity. A wrench of this type must be used as there is very little room in which to work. You need it whenever a left rear fender is damaged or the gasoline tank springs a leak. It is a drop forging, heat treated.



Spanner Wrench

For 1934-1935-1936 Pick-Up—1934 Victoria Filler Tube



No. V-154

Price \$1.50

This wrench is equally important and is used on 1934 Pick-up and Victoria also 1935 Pick-up. It is a drop forging of alloy steel. You need one of each type.

KRW "Master" Ammeter

**No. 108
Price \$8.00**

Shipping Weight 4 Lbs.

The KRW Master Ammeter is a high grade, accurately calibrated instrument used for checking with "dash meters," the generator charging rate. Millions of storage batteries are ruined and burned from overcharging because the charging rate is not properly set to suit each individual driver. Overcharging overheats the battery,



quickly evaporating the water and causes the plates to buckle and "shed" the filler. An accurate instrument is, therefore, an important piece of equipment.

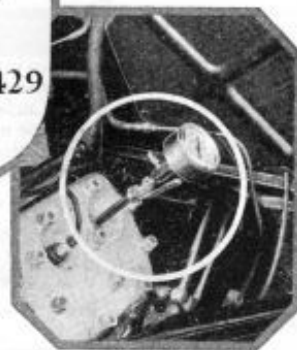
KRW Lever Type Compressometer

No. 429 \$4.75



429

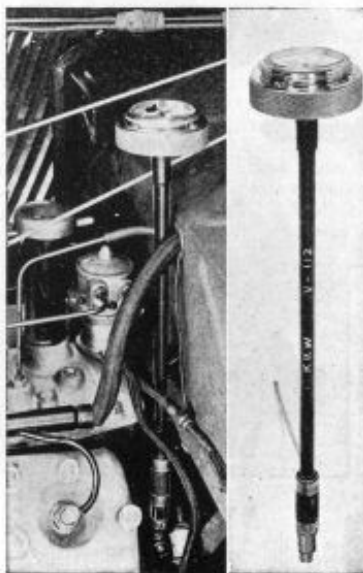
*Shipping
Weight
4 Pounds*



rubber plug holds tightly against compression. Two sets of rubbers are supplied to fit both Standard and Metric sizes. (Other sizes can also be supplied). The "Quick Action Attachment" only can be supplied to fit previous models at \$2.75 each. See Gang Gauge Set, page 52

KRW Oil Pressure Gauge for V-8

**No. 112
Price \$2.90**



The KRW Oil Pressure Gauge is especially designed for use on the V-8 motor. It is equipped with a flexible connection so it will clear the dash—can be screwed into place by hand—then tightened at the base with two or three short strokes of an "S" Wrench. To reduce the price, we have recently changed to a vertical type gauge instead of the type shown but which maintains all of the features, such as adjustable pointed, screw-on bezel with bevel plate glass, etc. An accurate Oil Pressure Gauge is an important instrument in any shop—gives definite information on the condition of your oil pump, pressure relief valve, bearings, etc. If pressure cannot be built up, then you must locate the trouble by process of

elimination, starting with the pressure relief spring, then the pump, pipes, etc. By substituting other connections, this Gauge can be used on other cars. See Gang Gauge Set, page 52.

If Ford Laboratory Test Set is used the last three items are not required. Fleet owners and independent repair shops who do not have the large test set will find these tools entirely satisfactory.

KRW Special Spark Plug Wrench

No. V127

Price \$1.25



This fine double end, heat treated alloy steel wrench is designed especially for quick service operation. It is accurately made and will not damage the spark plugs. Dealers usually order these in proportion to the number of mechanics in that department.

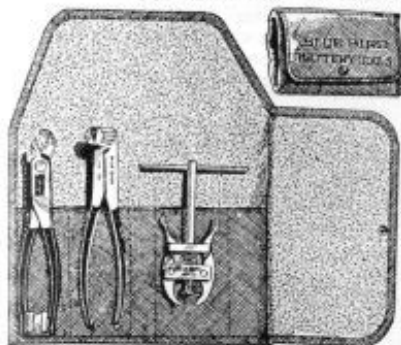
Battery Service Tools

No. 441

Price \$3.00 Kit

Shipping Weight 2 Lbs.

Here they are! Three new battery tools that insure EASE, SPEED, and SUPERIOR CONNECTIONS in servicing Auto Batteries. No other tools are required for the complete removal or replacement of an automobile battery. All three are made from drop forgings carefully machined and heat treated for real service.



WHEN ORDERED SEPARATELY USE THESE NUMBERS

No. 441A Hex Nut Plier and Post Cleaner.....	\$1.25
No. 441B Clamp Spreader and Cleaner.....	\$1.00
No. 441C Terminal Clamp Lifter.....	\$1.50



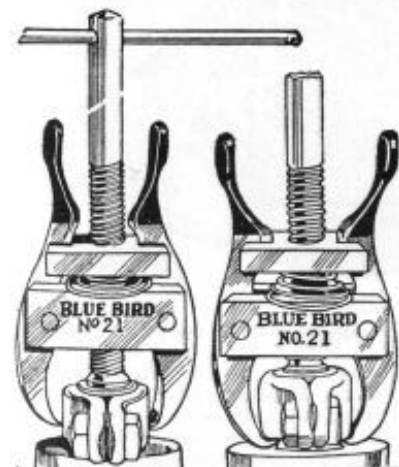
A Super Leverage Plier to which the most stubborn nut yields. A clean post and a tight nut insures perfect contact and eliminates loss of current. Can also be used for a general purpose wrench.

Terminal Clamp Spreader, Cleaner



A quick, easy and efficient tool to spread and clean terminal clamps in one operation. Saves time and improves electrical contact.

Universal Terminal Clamp Lifter



A super powerful Lifter designed and guaranteed to remove badly corroded clamps easily, regardless of form or shape. "The harder you pull, the tighter it grips." If there is room enough between the bottom of the clamp and the cell cover for the jaws to enter it will pull straight up; otherwise the sharp points of the jaws engage in the sides of the clamp with a vise-like grip, as shown in picture. We do not believe you can buy a better Kit of Battery tools at any price.

SEE! March 1934 Ford Service Bulletin.

No. 180

Battery Carrier

50 Cents

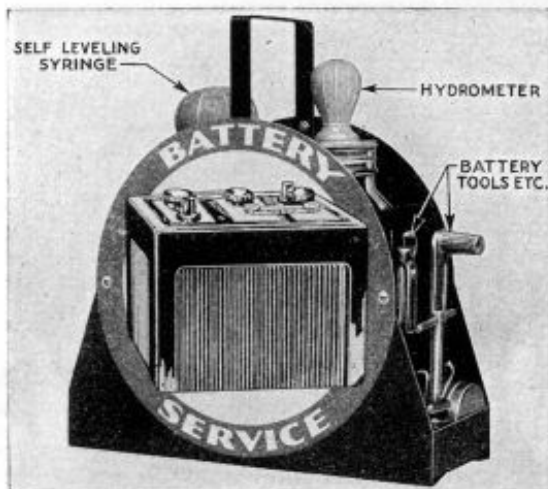


A New Carrier to handle the new style batteries without handles. Gets into tight places. The handle is made from rubber belting which provides insulation and resists acid. Designed by the largest battery maker in the country and approved by the Ford engineers. Price \$.50 each or three for \$1.00 postpaid, if cash accompanies order.

KRW Battery Servicer

No. 463

Price \$6.95



The KRW Battery Servicer includes everything you need for servicing the Owner's Battery in the car. Such as,—A Hydrometer with correction thermometer, Self Leveling "battery water" Syringe, Battery Carrier, Battery Post Tool Kit (shown in next column), Two Quart Glass Jars for Water and Battery Solution, Assortment of Lead Terminal Shims, Assortment of Battery Bolts and Nuts, Can of Terminal Grease, Double Open End Terminal Wrench, Double End Hex Socket Wrench, and a most attractive and convenient Carrying Case.

When the men on whom you depend for Battery Service have everything they need to render this complete service when they go to the car, the following definite procedure and plan is easy. However, if several trips to the Tool Crib or Battery Department are required, some of the operations are apt to be slighted. It is impossible to estimate the number of New Battery Sales that are lost because lack of proper equipment made the job look difficult. With Human Nature there is always a temptation to reason that the owner's battery will probably be Okey after being refilled with water and then run a few hours,—while the correct procedure indicates that it should be removed from the car and tested on a properly designed "High Rate" Discharge Set to ascertain its present capacity and the amount of additional service that should be expected from it. This operation should be done in the owners presence, and if found to be defective or nearly worn out, then you have the ideal opportunity to sell him a new one, otherwise his battery may fail near one of your competitors and you lose the sale. However, if the Mechanic is fully equipped, this temptation is removed. Almost every major Oil Company, Super Service Station and Battery Company has recognized the necessity for this type of Equipment and thousands are now in daily use by Alert Battery men. No Ford Dealer can afford to be without one or more of them. KRW Price is very low. SEE! Page 95 for Battery Testing Equipment. Also September 1934 and September 1935 Ford Service Bulletins for additional information and helps.

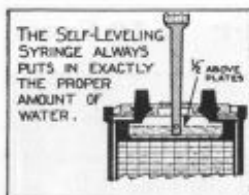
KRW No. V-160 Carburetor-Jet Wrench



Is made of nickel steel, heat treated. A Carburetor Jet Socket Wrench on one end and a Screwdriver on the other. Included in groups 6 and 7. See pages 50-51.

Mr. Dealer,

Is your place just another one of 400, or is it the outstanding one of 400?



Self-Leveling Battery Syringe

No. 481 included in Ford Laboratory Test Set Group 6, Page 50, and KRW Battery Servicer page 57. It is a large size, well made, syringe for refilling batteries. A small hole in the nozzle, $\frac{1}{8}$ -inch above the plates insures filling each cell exactly the same.

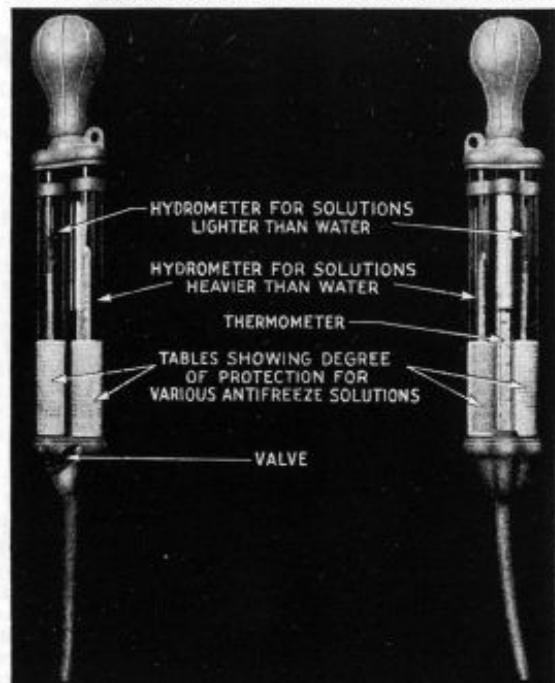
Neon Spark Plug Tester and Screwdriver

No. 453 included in Groups 6 and 7 on pages 50 and 51 is extremely handy in "tune-up" work.

The "SHOCKLESS" handle is made of an amber colored, transparent insulating material within which is mounted a small NEON Tube for checking the proper firing of spark plugs. It is $5\frac{3}{4}$ in. overall, $\frac{3}{4}$ ths. diameter handle with $2\frac{1}{4}$ x $\frac{1}{8}$ th Blade, which is suitable for headlight connections and other small work. Every mechanic will want one.



Radiator Non-Freeze Tester



No. 480 included in Group 6, page 50. You can test any anti-freeze solution that may come into your shop with this new Combination Tester. It incorporates two Hydrometers and a large easily read thermometer all in one instrument. One of the hydrometers for lighter than water solutions and the other for heavier than water solutions. A valve at the junction of the tubes permits using either one separately. Each tube has a movable sleeve on which is printed charts showing the degree of protection for various solutions as calculated from the temperatures of the solution and the marks on the float. The specific gravity of various anti-freeze solutions and of water changes at various temperatures and for this reason any specific gravity reading is valueless unless the temperature of the anti-freeze solution is taken into consideration. A wall chart with many additional tables for the less widely distributed anti-freeze solutions is also supplied with each instrument. Every dealer needs one or more of these testers. SEE! Page 320 September 1935 Ford Service Bulletin.

BV-45 Step Feeler Gauge

Included in Group 6 page 50 shows a picture of the original tool. However the New Gauge illustrated on page 8 and in Group 7 page 51 which includes the extra blade for checking ignition points on 1936 Ford V-8 and Lincoln Light 12 distributors is furnished. Every MECHANIC needs one of these tools to insure absolute accuracy on the operations for which it is designed.

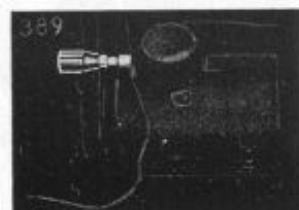
V-152 Battery Hydrometer with Thermometer

Included in the Motor Analyzer Group 6, page 50. It is as much of an improvement over the Old Style Battery Hydrometers as the automobile is over the horse and buggy. Like the Radiator Anti-Freeze Tester

it is equipped with a "built-in" Thermometer and Correction Table which shows the operator immediately in degrees of specific gravity what to add or subtract from the "Float Reading" for the variation in temperatures. This Shop Size Tester is well made and carefully protected with rubber. Battery Cells which show a variation of more than 50 points indicate that the battery should be removed from the car and tested on a "High Rate" Test set to determine whether or not there is any internal trouble. Better have a couple of these Hydrometers in stock. SEE! October 1934 and August 1935 Ford Service Bulletins.

No. A389 Generator Socket Wrench

Included in Groups 6 and 7 pages 50 and 51. It will save time replacing the hex head cap screw which fastens the wires to the cutout. The proximity of the radiator makes this tool necessary. It can also be used for dozens of other purposes. Every "Tune-Up" Set should include one.



No. 446 Set of (6) Vanadium Steel Wrenches

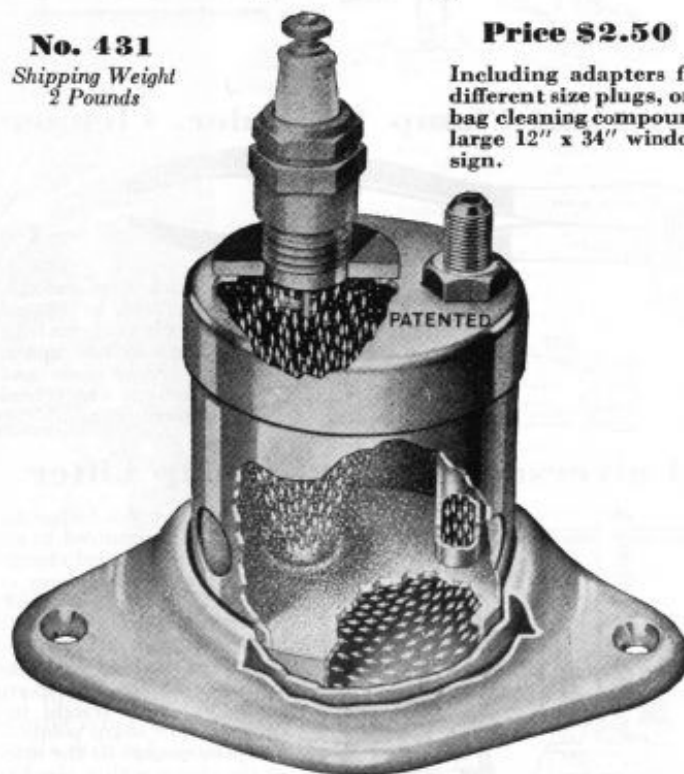
Included in Group 6 page 50 are particularly adapted for the Motor Analyzer Tool Kit as they include the popular sizes used on Engines and Accessories of most cars. They are made of Vanadium Steel Forgings, accurately machined and heat treated. The open end Jaw is about $\frac{3}{4}$ ds the thickness of ordinary "S" wrenches. The opposite end is a 12 Point Hex. Some of your mechanics may be interested to purchase them at this extremely low price of 90 cents per set of six.

"Edde" Spark Plug Cleaner

No. 431
Shipping Weight
2 Pounds

Price \$2.50

Including adapters for different size plugs, one bag cleaning compound large 12" x 34" window sign.



The "Edde" Spark Plug Cleaner cleans plugs in a few seconds, without damage to the insulator or necessity for disassembling the plug. It operates on the sand blast principle, using compressed air and a special cleaning compound. It removes oxide film, carbon and oil coatings instantly. The plug should be tested in the usual way for broken porcelain, etc. A large, 12 x 34 window sign will help bring customers into your shop for this cleaning operation, which is very profitable and often results in the sale of new plugs, engine "tune-ups" and other profitable services. You can pay four times as much, but this little device will do the work satisfactorily.

Ford Repair Work is Play—When Done the KRW Way!

KRW De Luxe Car Covers

Tailored to fit 1934, 1935 and 1936 Cars

No. V-362

Price \$6.25 Set



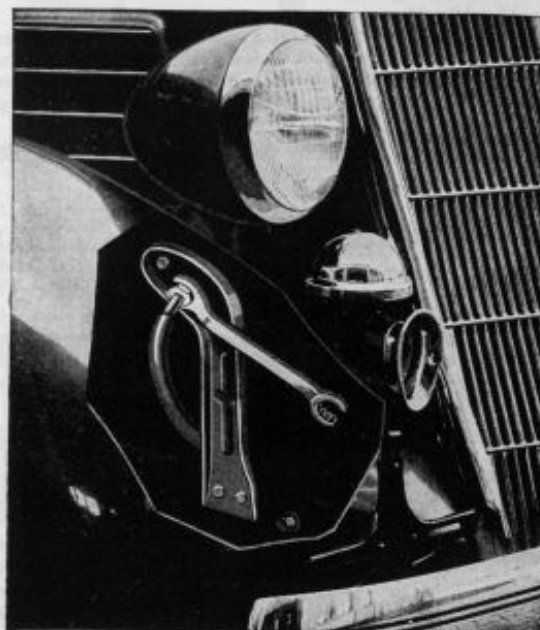
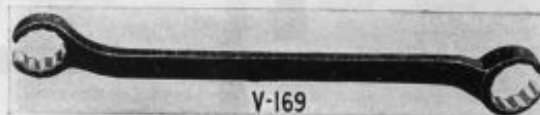
Direct Factory Shipment—5 Sets for \$28.00

KRW De Luxe Car Covers for 1934-1936 Cars are in a class by themselves. They are made of heavy, fleece lined, pre-shrunk, Jersey cloth cut to liberal dimensions so they are not stretched when in use. The Fender covers are designed to completely protect the New Fenders with the Extended Apron as well as the Headlight, Horn etc. This important feature prevents the enamel on the Headlights from being scratched when the (average) repairman supports himself on it, and also holds the Covers in place on the Fenders. Additional straps are provided to tie it elsewhere. The Door Covers are Combined Jersey and heavy Drill Cloth. The Seat Cover and Steering Wheel Cover of Drill Cloth also. The Set includes 6 pieces. NONE FINER AT ANY PRICE.

Headlight Adjusting Wrench

No. V-169

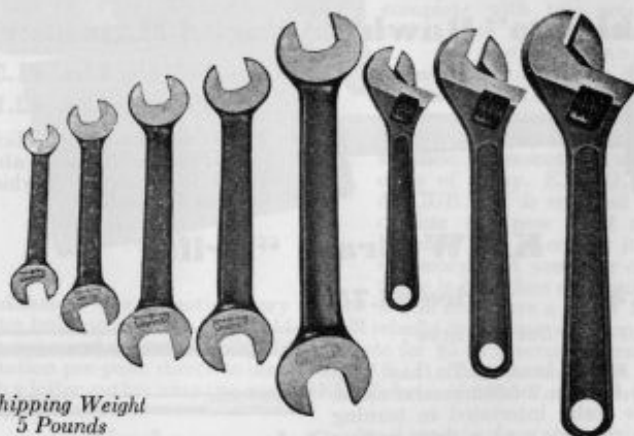
Price 90 Cents



This KRW Headlight Adjusting Wrench is especially designed for removing, replacing or focusing Headlights. It is designed with an open end, twelve point, Hex Socket on each end. One end fits all V-8 Headlights and the other end fits all previous models starting with model A. This operation is rather difficult unless this special wrench is used.

MECHANICS TOOLS

No. 78 KRW Wrench Set \$4.50



Shipping Weight
5 Pounds

MECHANICS: Here's your chance to buy a set of five Williams high grade Machinists Wrenches and a set of three 6-8-10 inch Adjustable Wrenches of a well known make. This set is for the mechanic who wants quality tools.

See page 50 for a set of six, light weight, drop forged, vanadium steel, combination open end and socket wrenches for 90 cents.

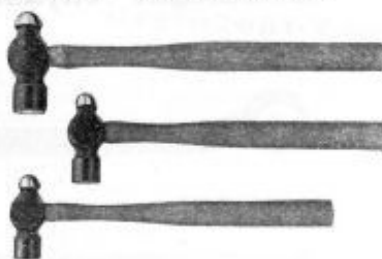
KRW "Ball Pein" Hammers

No. 82 Price \$2

For Set of Three

Shipping Weight 5 Pounds

The K R W Ball Pein hammers are made for Mechanics who appreciate quality — without extravagance. The sizes 12—18—24-ounce are correct for general garage use. Forged from tool steel, carefully machined and balanced, then heat treated. The faces are hardened and polished. Good handles are hand fitted to obtain "perfect balance." Boys: You can pay more but you cannot buy a more serviceable product.



No. 83

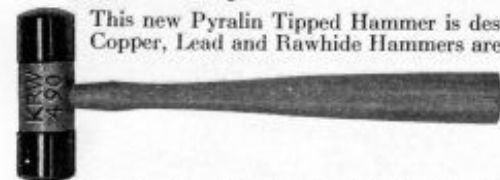
Copper Hammers



1 Lb.	\$.80 Each
1½ Lb.	1.15 Each
3 Lb.	1.80 Each

GOOD MECHANICS use Copper or Lead Hammers on the majority of their work. They do the trick without leaving any evidence. Most every mechanic needs a set. The average car owner appreciates a job that is not battered. Sledge hammer mechanics are passing out of the service.

No. 490 Pyralin Hammer \$1.00



This new Pyralin Tipped Hammer is designed for use where Copper, Lead and Rawhide Hammers are found to be a little too soft. Pyralin is hard and tough but it will not mar finely finished metal surfaces. The body of the

Hammer is made of Cold rolled Steel to give it weight, with Pyralin replaceable Tips cemented on to Dowel Pin Type ends. (Extra Tips cost 25c each). Good Mechanics want them.

"Chicago" Rawhide Mallets

No. 495 1¾ Dia., 3¼ Length, 7½ oz. Wt. \$1.00

No. 496 2¾ Dia., 4¼ Length, 21 oz. Wt. \$2.40



"Chicago" Mallet heads are made of solid Rawhide, firmly glued and steel riveted. Fitted with regular Hammer Type Handle of Selected Hickory. They are durable, hard and yet the resilient hide

surface will strike an effective blow without marring. Used for assembly of tight fitting parts, for shaping metals and thousands of other purposes where a sharp metallic blow would be destructive.

"Chicago" Rawhide Faced Hammers



No. 497 11⅞ Lbs. \$1.50

No. 498 21¼ Lbs. \$2.10

Malleable Iron Heads, Hickory Handle. Replaceable (press fit) inserted Rawhide faces at 50c each.

KRW Brass "Drifts"

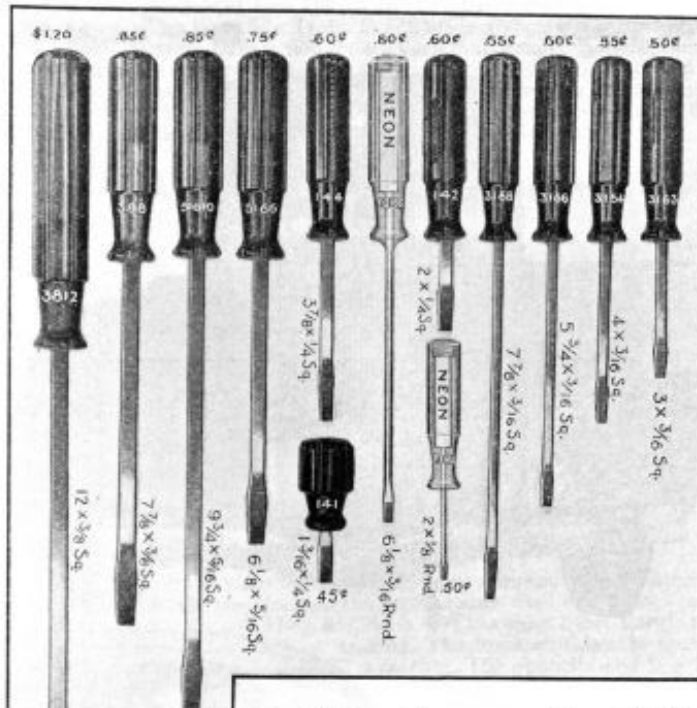
No. 382 Price \$1.75

For Set of Three

This set of brass drifts has been made for the mechanic who cares, and is really interested in turning out high grade work without leaving any evidence. They are made in three sizes ½, ⅝, ¾, x 8½ inches in length. Weight per set 2½ pounds.



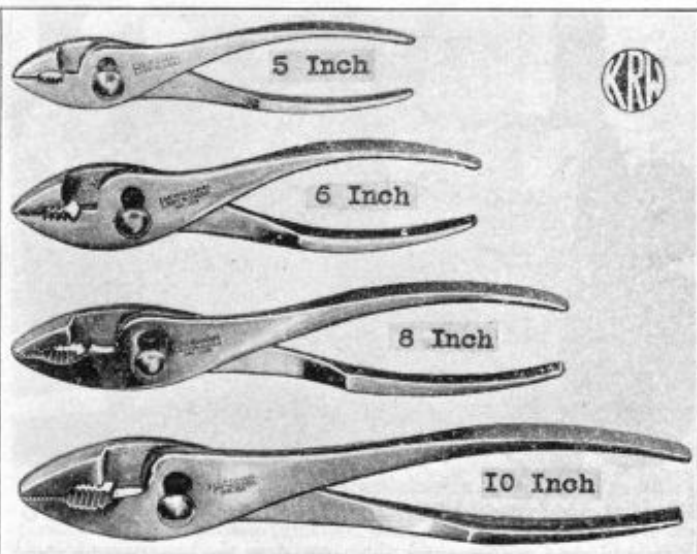
XceLite "Shockless" Screwdrivers



XceLite Screwdrivers are made from the highest quality Alloy Tool Steel. Each blade is individually tested. The Handles, moulded from tough "shockless," transparent material, similar to Pyralin, will stand a reasonable amount of hammering without splitting or burring on the end. Blades are made with either round or square Shanks. The latter is preferable on the larger sizes so that a wrench may be applied to start stubborn screws. Included in the assortment illustrated above are two Special Screwdrivers equipped with NEON TUBES for testing Spark Plugs. The Prices quoted above each Screwdriver represent a substantial saving over regular retail prices. GUARANTEED 1 YEAR Defective Screwdrivers will be replaced by the factory.

High Grade Pliers

Group II (5-6-8-10 Inch) \$1.50 Set



A Real Bargain in High Grade Pliers. Drop forged from High Carbon Steel, accurately machined and polished. Heat treated Knurled Handles, Heavily Nicked on copper. Fully Guaranteed. SEE! Additional tools Group 6, page 50. Also micrometers, feelers etc. pages 8 and 9.

All tools listed on this page are of the highest quality and offered to you at a substantial saving over what you would pay for them elsewhere.

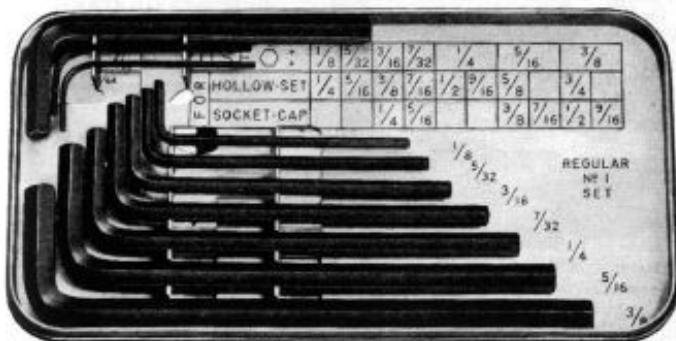
Model "T" Tools and Equipment 75% Discount. Write for Prices

Hollow Set Screw Wrench Set

For Allen Set Screws

No. 492

Price \$2.00



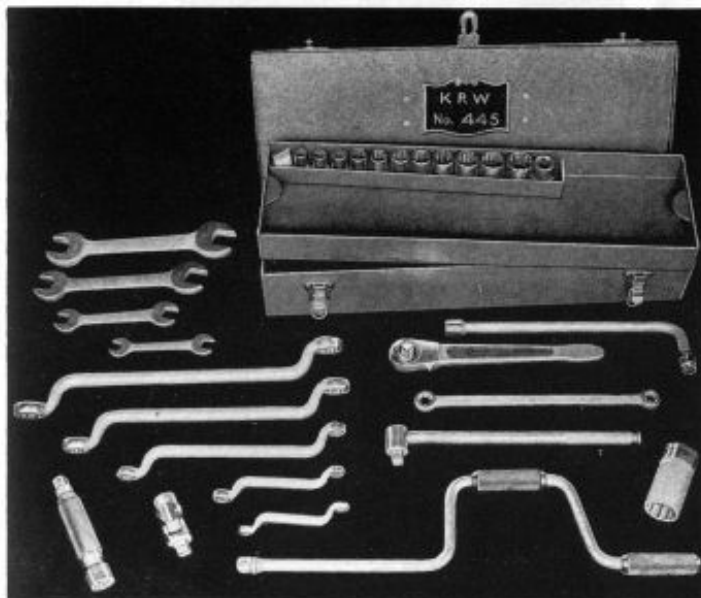
This new Wrench Set was developed to meet TODAY'S service station requirements. Several automobile manufacturers are using ALLEN HOLLOW SET SCREWS for more and more purposes and when one of these need turning the average garageman "files" a piece of iron or steel to fit it, only to have the corners turn over and slip without moving the screw. This set is made of high grade alloy steel, carefully heat treated and hardened to stand up under any service. A set of these special wrenches in a neat pressed steel case will prove a wise and profitable investment. Shipping Weight 2 Pounds.

Williams "Super Wrench" Kit

Thirty Wrenches and Case

No. 445

Price \$21.00



This group of (30) Williams (chrome-alloy) "Superwrenches" has been selected for FORD mechanics who want the best obtainable at any price. Some of them have been especially designed for Ford Service. Every wrench is the finest quality, accurately made, unusually well finished and GUARANTEED 1 YEAR against breakage. A neat metal carrying case is supplied. Price shown opposite each item is the cost when purchased separately. Do not confuse these tools with lower priced imitations.

Standard Detachable 12-Point "Supersockets"

ST-1214	7/16"	.36	ST-1226	1 1/8"	.45
ST-1216	1/2"	.36	ST-1228	1 1/4"	.45
ST-1218	9/16"	.36	ST-1230	1 1/2"	.54
ST-1220	5/8"	.36	ST-1232	1 3/4"	.54
S -1221	21/32"	.36	S -0418	3/16" Square	.45
ST-1222	1 1/16"	.42	SD 1232	1 1/8" Spark Plug	.75
ST-1224	3/4"	.45	SB 30	Drag Link Socket	.51

The J. H. Williams Company manufacture the most complete line of wrenches in this country. Let us know what you need and get KRW prices.

12-Point Offset Box Wrenches

19723	3/8" x 7/16"	.41
19725	7/8" x 1 1/2"	.42
18727	9/16" x 5/8"	.47
18731A	3/4" x 7/8"	.60
18033C	1 1/8" x 1 1/4"	.81

Drop-Forged "Superwrenches"

A-725	7/16" x 1 1/2"	.26
A-727	9/16" x 5/8"	.31
A-731A	3/4" x 7/8"	.52
A-330	1 1/8" x 1 1/4"	.63

"Supersocket" Handles and Parts

S-51	Reverse Ratchet	\$ 3.38
S-20C	Sliding Handle	1.13
S-15	Speeder	1.35
S-110-P	Extension	.60
S-140	Universal	1.35

Special Wrenches

1981A	9/16" Hex Opening Connecting Rod—Model 18 (V-8)	\$ 1.25
1984X	7/16" x 1 1/8" Double-Square Openings-Brake Adjusting-All Models	1.19

NOTE: No. 1981A Connecting Rod Wrench is the same as No. V-107 shown on Page 6 also in group 6 Page 50.

MECHANICS! SEE PAGE 84

YOU can buy well known household appliances, such as, washing machines, ironers, vacuum cleaners, refrigerators at WHOLESALE PRICES. If interested write for circulars and prices.

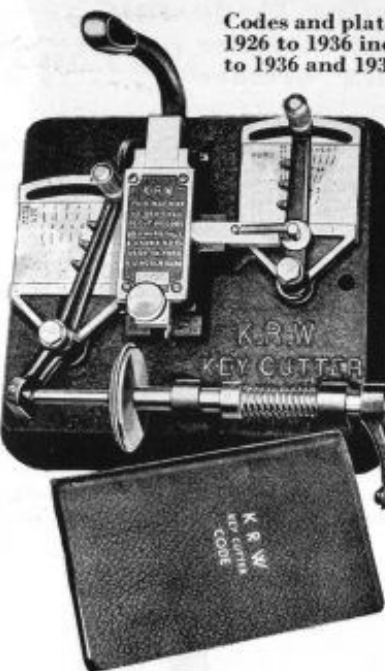
MISCELLANEOUS

KRW Key Cutter

No. ABV-388



Price \$12.50



Codes and plates included for all Fords from 1926 to 1936 inclusive. Also Lincoln for 1934 to 1936 and 1936 Lincoln Zephyr.

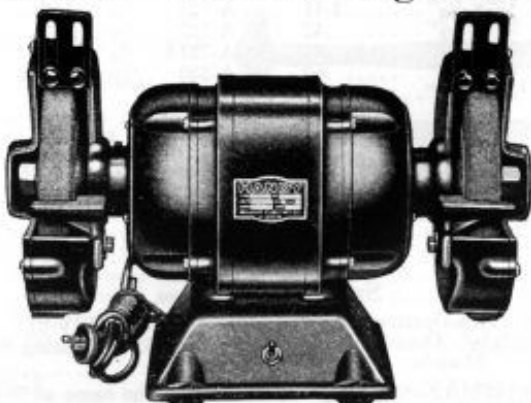
The KRW Key Cutter is unequalled for accuracy and simplicity of operation. Adjustments are provided to take up wear.—Every lever is under spring tension so there is no lost motion. A rotary file actually cuts the metal without distorting the key. The machine has been designed and improved so that it can be adapted to any future key series by revision of the plates and codes only. The machine is now shipped complete with two sets of code plates (4) and printed codes to handle locks used on Ford and Lincoln cars as enumerated above. Making keys is not only a profitable business but sometimes saves days of delay. EXTREME ACCURACY is required for cutting the new Ford and Lincoln keys therefore it is necessary that your key cutter be in first class mechanical

condition to obtain satisfactory results. If you now have a KRW key cutter built previous to July 1934 we will rebuild it like new and supply new codes and plates to bring it up-to-date for \$5.00 if returned transportation pre-paid, direct to our factory—K. R. Wilson, Arcade, N. Y. with a letter authorizing the work. SEE! February 1935 Ford Service Bulletin.

Codes and Code Plates

For \$3.00 we will supply four new code plates and 26 pages of code sheets to bring your KRW key cutter up-to-date to handle all Ford keys from 1928 to 1936 inclusive, including B&S tire lock, also Lincolns for 1934 to 1936, including the new Lincoln Zephyr, or 1936 sheets alone 25c.

"Baldor" Ball Bearing Grinder



71C 1/3 H.P. Bench Grinder \$28.00

71D 1/2 H.P. Bench Grinder \$40.00

The Baldor Ball Bearing Grinder has been designed to incorporate every desirable feature. It has no brushes, commutator, or centrifugal switch. The speed is 3600 R.P.M. which gives fast grinding speed. The motor is dynamically balanced to eliminate vibration. The ball bearings are large, felt sealed, and need greasing about once a year. The motor is totally enclosed and dustproof. Capacitor Type Motor has low starting current that meets all power requirements of Boston, Buffalo, Chicago, and other cities where ordinary split phase motors are no longer permitted. It can be used on lighting or power currents. Heavy guards protect the operator against flying particles and the danger of cracked wheel. The 1/2 H.P. Model is exactly like picture and carries two 7 x 1-inch wheels. The 1/3 H.P. Model is similar except ends of wheels are not covered. It carries two 6 x 3/4-inch wheels. Prices given are for 110 volt, 60 cycle. Add 10% if 220 volt motor is required. Shipping wt. 1/3 H.P. Grinder 60 lbs.; 1/2 H.P. Grinder 95 lbs. Shipped from factory—St. Louis, Mo. 5% additional if shipped from our stock at Arcade, N. Y.

KRW Grinder Pedestals

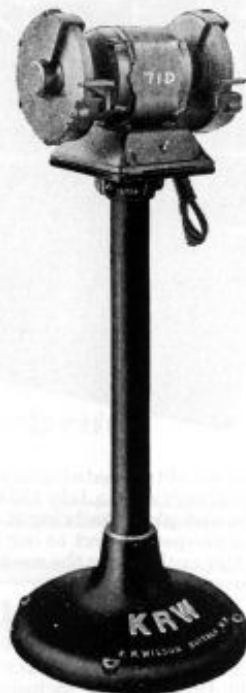
No. 157B for 1/3 H.P. Grinder } \$7.50
No. 157BA for 1/2 H.P. Grinder }

Shipping Weight Crated 80 Pounds

We have made this sturdy Pedestal for those who prefer a complete unit instead of a bench installation. The same base and column as furnished with KRW Brake Shoe Machine also Wheel Balancing Machine is used, enabling us to quote a very low price.



No. 157B



No. 157BA

KRW 1/2 Inch Special Drill

No. 70

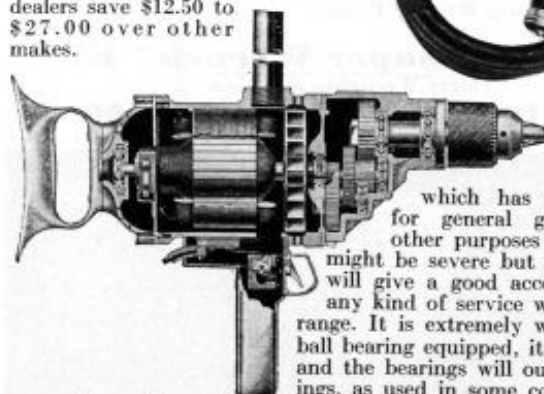
Price \$37.50

SPECIFICATIONS
 SPEED—500 R.P.M. Under
 Ordinary Load.
 WEIGHT—14 1/2 Pounds.
 CYCLES—25 to 60; Also
 Direct Current.
 VOLTAGE—110 or 220—
 Specify Which.

The KRW "SPECIAL" is ball bearing equipped chrome nickel steel, cut gears, balanced armatures, properly ventilated



This K R W 1/2 "Special" is built expressly for us by the pioneers of the electrical drill industry. By selling this under our own brand, all advertising and selling expenses are entirely eliminated and Ford dealers save \$12.50 to \$27.00 over other makes.



The K R W "Special" is a medium duty 1/2 Inch Drill

which has been developed for general garage use and other purposes where the work might be severe but not constant. It will give a good account of itself in any kind of service within its drilling range. It is extremely well made. Being ball bearing equipped, it has less friction and the bearings will outlast plain bearings, as used in some competitive drills, many times. The gears are wide faced and husky for this size drill. A comparative test with any and all other medium priced drills of similar capacity will convince you of its superiority. For honing we recommend a 5/8 or 3/4 heavy duty drill. A half-inch drill is not designed nor recommended for this class of "constant duty work."

"Pioneer" 5/8 Inch Heavy Duty Hone Drill

No. 70C

\$65.00

**F.O.B. Factory
 Louisville, Ky.**

The Pioneer Heavy Duty Hone Drill has been especially developed for honing and heavy duty garage use where the work is severe. A hone must have plenty of power behind it. The correct speed is about 450 R. P.M. to get best results.



Chuck cap, 5/8; Wt. 23 Lbs. Eight ball bearings in this model. Specify 110 or 220 voltage when ordering.

Please do not infer that we recommend "Honing" as a means of refinishing Ford Cylinders. Many Ford dealers service other makes of cars and with no special equipment available resort to honing as an inexpensive method.

**We can supply Drill Press Stands for both sizes.
 If interested, write for prices.**

"Pioneer" 1/4 Heavy Duty Drill

No. 70B

Price
\$27.50

F. O. B. Factory,
Louisville, Ky.



For 32-110-220 Volts—Specify Which

No Load R.P.M. 2000—Weight 5.8 Pounds

We are pricing the Pioneer heavy duty quarter-inch drill at about the same price as six most popular competitors charge for their light duty types, and saving you from \$10 to \$14 over the price they charge for their heavy duty drill. The Pioneer drill is full ball bearing and of sturdy construction throughout. In fact the motor is nearly as powerful as some manufacturers use in their one-half-inch light duty models. These low prices on all models of electric drills are possible only because we sell a large percentage of the entire factory output therefore no extras for advertising, promotional work or jobbers profits are added to swell the price.

"Signal" 1/4 Inch Electric Drill

No. 442 Our Price \$16.50

Shipping Weight 8 Pounds

This high grade, intermittent service, quarter-inch capacity drill, at about half the price of other, well advertised makes. Made and guaranteed by a reliable manufacturer with a background of more than 40 years' experience. Cast Aluminum Housing—Bronze, Wool—Packed Bearings, Ball Thrust Bearing—Cut gears of alloy steel, heat treated. Almond 3 jaw chuck—8 foot rubber covered cord. Net weight 7 1/4 pounds. Overall sizes—Length 12 inches, 4 inch diameter. Just the drill you need for 90% of your drilling operations. Especially adapted for installing accessories, etc.



Universal Motor
For A.C. or D.C.
110 Volts,
25 to 60 Cycle

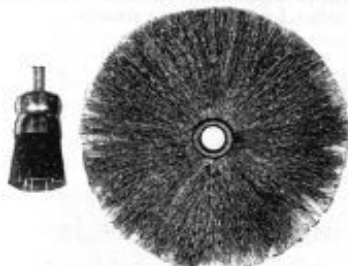
KRW Wire Brushes

No. 93B, 5 or 6-in. \$1.00

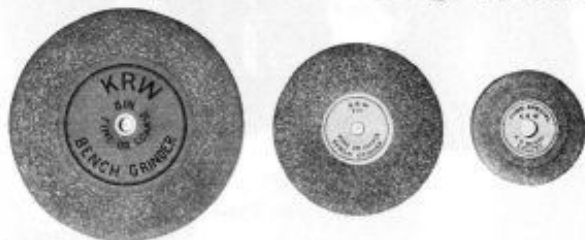
No. 93 Carbon .60

KRW Wire Brushes are the finest made. Our prices are about half what you would pay elsewhere for the same quality. Samples were obtained from every manufacturer, then these two were selected as being the most suitable for the purposes

for which they were designed. The Rotary Brush is made in such a manner that the wire cannot become loose and fly out by centrifugal force. It is used on Bench Grinders for removing rust and carbon from valve stems and other such uses. The Carbon Brush is designed for use in an Electric Drill and can be used for cleaning Cast Iron Heads and Pistons.—But SHOULD NOT be used on Aluminum heads or pistons, as it will cut and scratch this soft metal.



KRW Special Grinding Wheels



It will pay you to order Grinding Wheels from KRW. They represent the best we can find for their particular purposes. The grain, hardness and speed all play an important part.

Grinding wheel manufacturers are continually working with us to produce exactly what we need to obtain best results on the machines we manufacture or sell. It is evident we can give you the correct wheels at a

lower price than you would pay elsewhere and maybe get wheels wholly unsuited to the class of work intended. Order a few of each size for stock. They wear out, sometimes break. But you can't afford to hold up a job while you telegraph or telephone and then wait a few days for delivery. That unnecessary expense involved and lost profits many times offsets your investment—just another KRW suggestion!

No. 1 GW 8"x3/4" with 1/2" Hole for 8" Grinder.....\$ 2.00
No. 4 GW 7"x3/8" with 5/8" Hole for 7" Grinder..... 1.75
No. 2 GW 6"x1/2" with 1/2" Hole for 6" Grinder..... 1.50
No. 3 GW 4"x1/2" Cupped Wheel, for Valve Grinder (Special) .. 1.25
No. 5 GW 3"x 3" Cupped Wheel, Brake Grinder..... 1.75
An extra charge of 25c for packing when not shipped with other goods.



TURNER KEROSENE
No. 45 GASOLINE

Turner "Master" Blotorch

No. 136

Price \$6.75

Capacity 1 Quart—Weight 4 1/2 lbs.
Guaranteed Indefinitely

The Turner "Master" Blotorch embodies every modern improvement. Flame can be regulated for fine work or a large blast. The air adjusting tube (like a carburetor) provides entrainment of air for various gravity fuels, insuring perfect combustion—resulting in maximum heat. Automatic safety valve prevents pumping too high pressure. Explosions are impossible.

KRW - KEX Shop Towels

No. 131

Shipped from Mill
near Atlanta, Ga.

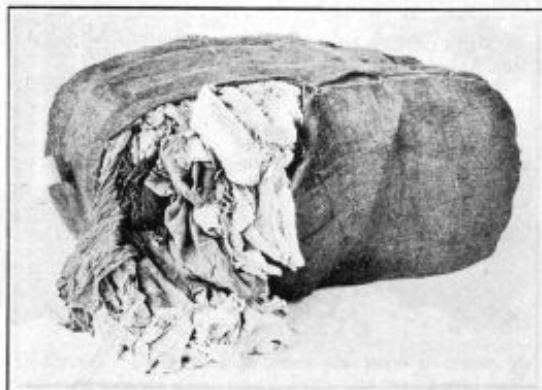
Price \$12.00

Per Bundle of 225

Shipping Weight
26 Pounds



Use KRW-KEX towels to replace rags and waste. Cut this item of expense to one-third your present cost. That's what thousands of Ford dealers are doing. Kex towels are heavy and of such construction that they are highly absorbent. Washing improves and makes them softer. They can be washed 25 to 50 Times. Laundries will clean them at 75c per hundred or your own men can do it as suggested below. Check up your bills for rags and waste for the past year and you will be surprised. Try out a bundle of Kex and you will thank us for the suggestion.



WASTE—Just What the Name Implies

Harrington Chain Hoists Pay Dividends By Saving Labor

What Various Types of Hoists Will Do

Based on 1-Ton Units

Required pull on hand chain.....	Peerless 78 pounds	Screw 71 pounds	Differential 216 pounds
Number of men.....	One	One	Three
Speed of hoist.....	31½ to 1	76 to 1	30 to 1
Average hoisting speed per minute.....	4½ feet	2 feet	1¼ feet

Peerless



Guaranteed for 5 Years

Heat treated alloy steel machine cut gears, load wheel mounted on ball bearings, rolled steel frames, practically unbreakable, light in weight, entirely enclosed.

½-Ton Capacity	
\$49.00 Shipping Wt. 67 Lbs.	
1-Ton Capacity	
\$63.00 Shipping Wt. 103 Lbs.	
1½-Ton Capacity	
\$84.00 Shipping Wt. 143 Lbs.	
2-Ton Capacity	
\$98.00 Shipping Wt. 187 Lbs.	



Screw Hoists

Safe and simple construction, double load chain, steel suspension, bronze and steel worm gears completely enclosed and packed in grease, a thoroughly reliable job, fully guaranteed.

½-Ton Capacity	
\$43.00 Shipping Wt. 102 Lbs.	
1-Ton Capacity	
\$51.60 Shipping Wt. 114 Lbs.	
1½-Ton Capacity	
\$68.80 Shipping Wt. 157 Lbs.	
2-Ton Capacity	
\$86.00 Shipping Wt. 227 Lbs.	



Differential Hoists

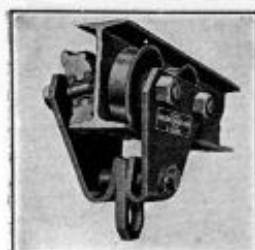
"Old Reliable"

For general garage use, for loads of one ton and less, we recommend this hoist. It is simple, efficient and so low in price you can afford to have plenty of them. They are "just right" for lifting motors, front and rear ends of pleasure cars.

½-Ton Capacity	
\$12.60 Shipping Wt. 40 Lbs.	
1-Ton Capacity	
\$16.80 Shipping Wt. 64 Lbs.	
1½-Ton Capacity	
\$21.60 Shipping Wt. 96 Lbs.	
2-Ton Capacity	
\$36.00 Shipping Wt. 154 Lbs.	

PRICES QUOTED ARE FOR DIRECT FACTORY SHIPMENT OR OUR FACTORY STOCK, AT OUR OPTION

Model "D" Trolleys



Have rolled steel frames, chilled tread wheel. Double row ball bearings with alemit fittings, adjustable for various I beam sizes. Load moves with very little effort. This trolley is positively the best money can buy.

½ Ton; Ship. Wt. 43 Lbs.	\$17.10
1 Ton; Ship. Wt. 58 Lbs.	19.95
1½ Ton; Ship. Wt. 58 Lbs.	25.65

All three sizes can be used with 6 to 9-inch standard I beam.

Model "F" Trolleys



Are all-steel construction, chilled wheel tread, roller bearings, easily adjusted for various sizes of I beams. They are small but rugged, light and strong, designed particularly for use on smaller sizes of track.

½ Ton; Ship. Wt. 29 Lbs.	\$14.55
1 Ton; Ship. Wt. 41 Lbs.	16.98
1½ Ton; Ship. Wt. 41 Lbs.	21.83

KRW Athol Machinist Vises

(Made from Semi-Steel Castings, Tool Steel Jaws)

ATHOL VISES need no introduction. They are the result of 40 years experience making High Grade Vises. No details in workmanship, material or design has been omitted. CASTINGS are SEMI-STEEL, having a tensile strength of more than 35,000 lbs. SCREWS are made from selected alloy steel and are carefully turned with a "buttress" thread which has more strength and less friction than any other type. The Ball for the handle is welded on. The NUT is malleable iron and easily replaceable if worn. TOOL STEEL JAWS are welded direct to the faces of the jaw castings eliminating screws, studs, etc. which are often bothersome. These vises are made for us by Athol in large quantities with the KRW Trade Mark cast on the side. We are therefore enabled to sell you these Genuine Athol Vises at a substantial saving.

Stationary Type

Width Jaw	Opens	Weight	Reg. Price	KRW Price
3½-in.	5 -in.	29 lbs.	\$11.25	\$ 8.45
4 -in.	6 -in.	44 lbs.	12.75	9.56
4½-in.	6½-in.	62 lbs.	15.50	11.65

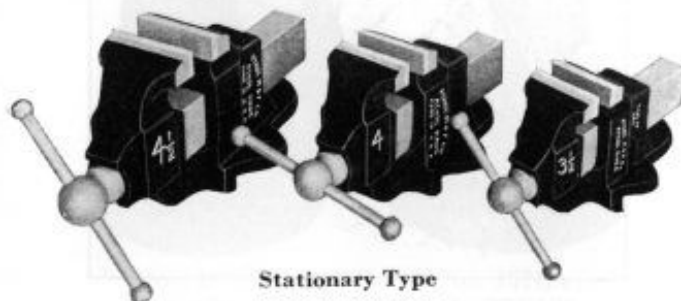
Sizes up to 8-inch jaws can be supplied, write for prices.



Swivel Base Type

Width Jaw	Opens	Weight	Reg. Price	KRW Price
3½-in.	5 -in.	34 lbs.	\$15.00	\$11.25
4 -in.	6 -in.	54 lbs.	17.00	12.75
4½-in.	6½-in.	65 lbs.	20.00	15.00

These prices are F. O. B. our stock, Arcade, N. Y. 5% Discount if ordered in lots of six or more.



Stationary Type

KRW Cleaning Tank

"Electrically Heated—Air Agitated"

No. 114

Price \$55.00



Shipping Weight
Crated
470 Pounds

Specify for 110 or 220 volts,
operates on AC or DC.
Consult your power com-
pany before ordering.

The KRW "Electrically" Heated-Air Agitated Parts Cleaning Tank is successful because it is insulated like a refrigerator. The outer casing is made of heavy gauge sheet steel with welded joints, the inner tank is slightly lighter material and insulated with 1½ inch of Rock Wool insulation to prevent loss of heat by direct radiation. Tank measures 4 feet long, 2 feet wide, and 30 inches deep inside measurements. Capacity 125 gallons. The cover is well made and tight fitting to prevent evaporation of solution and loss of heat. Drainage Valve, Filling and Overflow Connections are provided so that it can be connected direct to water and sewer systems. A perforated ¾ths in. pipe is installed lengthwise and near the bottom of the tank so that an air line can be attached to give the solution complete agitation and better cleaning. A Steel Mesh Parts Basket is also included for handling of small parts.



The heater is 5 KW capacity, but is used only two or three hours daily to bring solution up to best working temperature of 168 degrees. Power company usually quotes low rates on this class of service. If 3c per Kilowatt then hourly operation cost would be 15c. It can be placed anywhere in your shop without increasing insurance rates. SPECIAL CLOSE-OUT PRICE, representing less than two-thirds actual manufacturing cost, subject to stock on hand.

KRW Metal Parts Cleaning Compound

"Will Not Attack Aluminum"

No. 125



300 lb. Barrel
61½¢ per lb.



100 lb. Kegs
71½¢ per lb.



50 lb. Kegs
9¢ per lb.

For Direct Shipment from Factory in New York City

KRW Metal Parts Cleaning Compound has been especially compounded for use in heated cleaning tanks. Certain chemicals have been added to prevent corrosion and absorption of Aluminum pistons and other parts, a common occurrence when ordinary cleaning compounds are used. This factor is much more important than the price. K R W Compound is economical. Four ounces of powder to each gallon of water or 30 pounds for a complete recharge, which should last for weeks in the average garage. The old solution is often used for cleaning greasy garage floors, therefore serves two purposes at only one cost. Compare these prices with what you have been paying, on the basis of quantity used per gallon of water, and the results obtained. In most cases it is less than half. Buy from K R W and save the cost of advertising and selling. K R W saves you money on everything.

Automatic Alcohol Dispenser

No. 483

Price \$7.50

This Automatic Alcohol Dispenser pays for itself in a few days thru the saving of time and loss of alcohol by antiquated methods. No more labor than turning the faucet at your kitchen sink. The complete unit is easily and quickly attached to any steel drum or barrel. Automatic pressure reducing valve operates from your air line maintaining 2 to 4 pounds pressure on the drum. To comply with various state laws a safety valve is built into it and set to blow off at 5 pounds. This device is well made and UNCONDITIONALLY "Guaranteed for Life" by the manufacturer.



Whenever you
think of
NEW TOOLS
write
K. R. WILSON
for Prices

KRW "Low Down" Steel Creepers

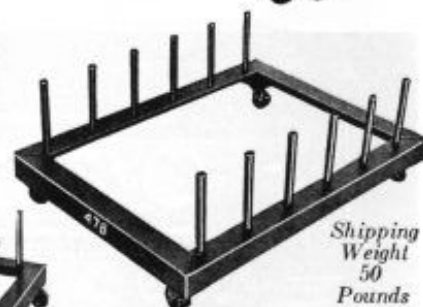
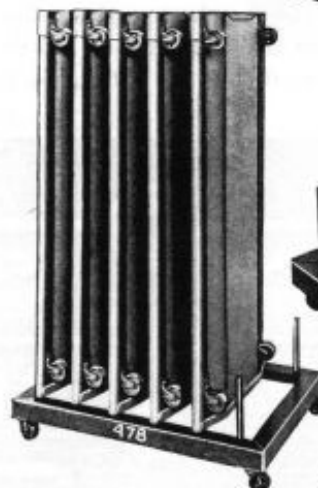
No. 76

Price \$3.25 Each

Six for \$17.00

The KRW "Low Down" All-Steel Creeper is well designed and sturdily built to stand rough usage. The sides and ends are re-inforced, all joints are electric welded. It is extremely low; the greatest height only 3 inches from the floor. It is equipped with four wide tread, ball bearing casters enabling the mechanic to move easily under a car. We do not believe you can buy a better one.

Shipping
Weight
Crated
20 Pounds



Shipping
Weight
50
Pounds

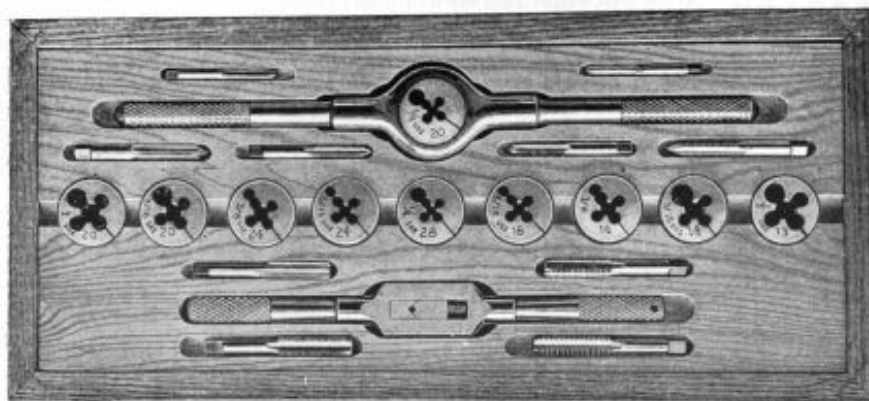
Creeper Dolly

No. 478

Price \$5.25

The KRW Creeper Dolly is just what you need to conserve space and keep the creepers clean also away from the walls and benches where they are usually placed for lack of a better place to put them. It's another way to keep your shop "in order."

KRW TAP AND DIE SETS



No. 79

Shipping Weight 15 Pounds

Price \$15.00

The KRW Special Tap and Die Set has been made to satisfy the most critical mechanic. It contains both SAE and USS Taps and Dies— $\frac{1}{4}$ -5/16-3/8-7/16- $\frac{1}{2}$ inch. Each die is equipped with a collet (not shown in cut) to guide it straight while threading bolts or rods—a very valuable feature. Tap and Die Stocks are made from forgings accurately machined and cyanide hardened. We believe this outfit offers the greatest value in the country.

No. 79-B

Price \$21.00

Shipping Weight 18 Pounds

Our Medium Size Tap and Die Set is suited to the needs of the average garage and service station. Contains three machine screw dies 6/32-8/32-10/32. Five USS Dies $\frac{1}{4}$ to $\frac{1}{2}$ inch. Seven SAE Dies $\frac{1}{4}$ to 5/8. Two pipe dies 1/8 and $\frac{1}{4}$ inch. Three machine screw taps 6/32-8/32-10/32. Five USS Taps $\frac{1}{4}$ to $\frac{1}{2}$ inch. Seven SAE Taps $\frac{1}{4}$ to 5/8 inch. Two pipe Taps 1/8 and $\frac{1}{4}$. One No. 0 Die Stock. One No. 3 Die Stock. One T Handle Tap Wrench. One No 2 Tap Wrench. All Dies have corresponding size Collets to guide them while threading bolts or rods. The K R W price of this set is so reasonable that no shop can afford to be without one.



REMEMBER: "A workman is no better than his tools!" Increase your business by turning out better jobs. These tools enable you to do it.

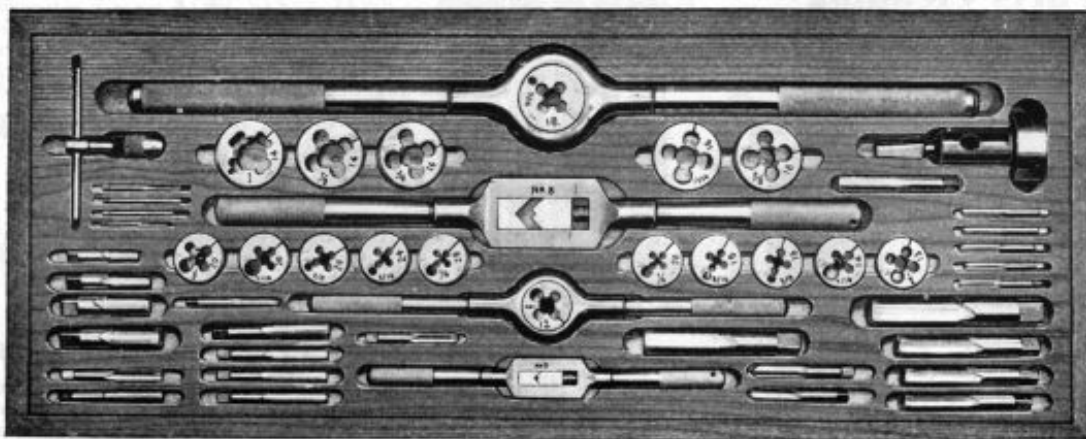
No. 79-C

Shipping Weight 40 Pounds

Price \$35.00

Our largest Tap and Die Set includes practically every tap and die that is ever used in connection with an automobile. It contains 17 Round Adjustable Dies, 18 Hand Taps, 7 Machine Screw Taps, 1 T Handle

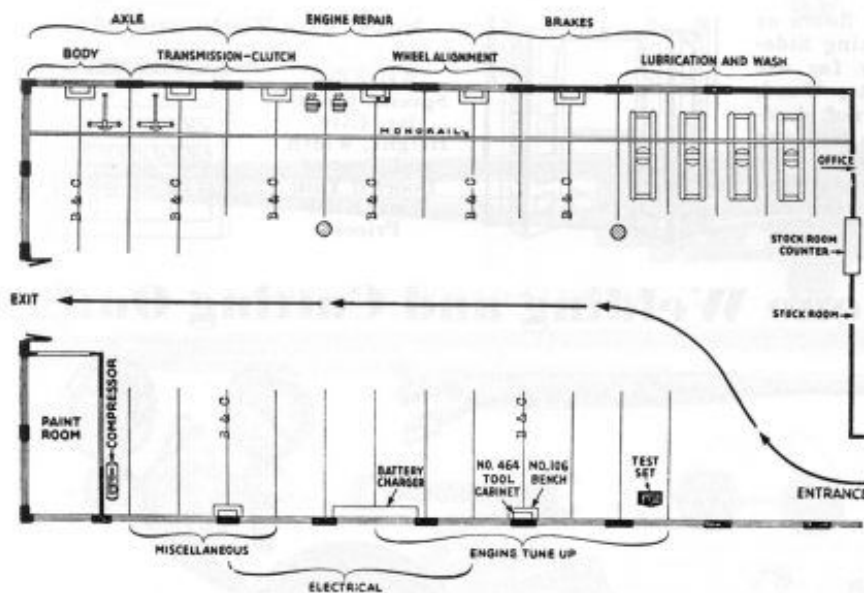
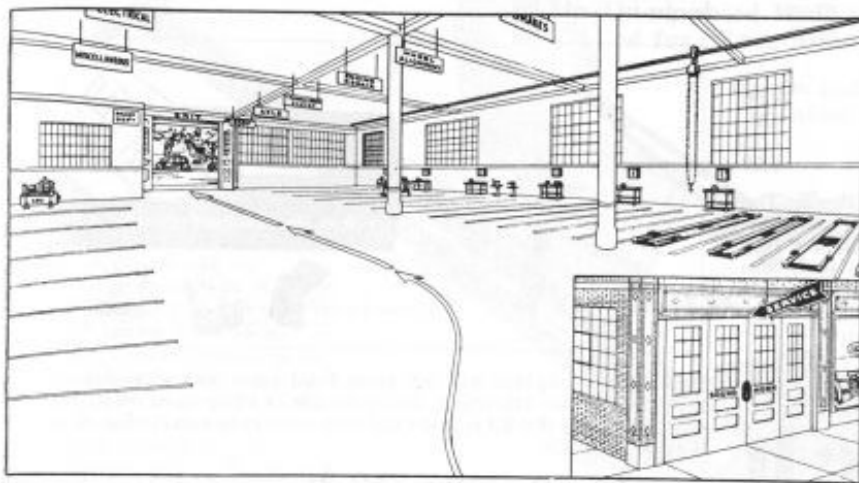
Tap Wrench, 1 Bit Brace attachment, 1 fifteen-inch Stock, 1 twenty-one-inch Stock, 1 eleven-inch Tap Wrench, 1 twenty-one-inch Tap Wrench. All popular sizes of Taps and Dies in USS and SAE are included. Also $\frac{1}{8}$ to $\frac{1}{2}$ Pipe Taps and 6 to 14 machine screw threads. All dies are equipped with corresponding collets (not shown in cut) to guide them straight while threading bolts and rods. We do not believe it is possible to buy a better outfit for less than double this price.



Decentralized Shop Floor Plan

SEE! Ford Service Bulletins, March and November 1934

This plan of decentralizing equipment enables Dealers to utilize available floor space to better advantage, saves mechanics time in securing tools, creates an impression of greater efficiency in the customers' minds and makes a more effective display of equipment. It also facilitates assigning mechanics to those particular operations for which they are best adapted to perform.



KRW "Individual" Mechanics Bench

Vise \$8.45
Extra

No. 106

Price \$11.00

F.O.B. Factory Jenkintown, Pa.

Shipping Weight K. D.
142 Pounds

Size 42x29 1/4 In.

Individual Steel Benches are far superior to the old style wall type, wooden top, long benches. They are handy and provide plenty of room for all parts that would usually be put on a bench. The mechanic can work on all three sides on many operations to a better advantage than when using continuous wall benches. At the low prices quoted, Ford dealers can well afford to clean house with their old style bench equipment and install "Individual" Benches for each mechanic. It means much greater production and a cleaner shop.

See next page for larger benches, drawers etc.

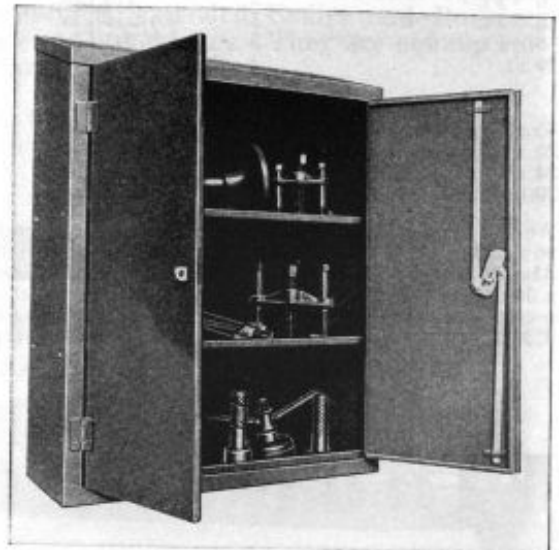


KRW "All Steel" Tool Cabinet

No. 464

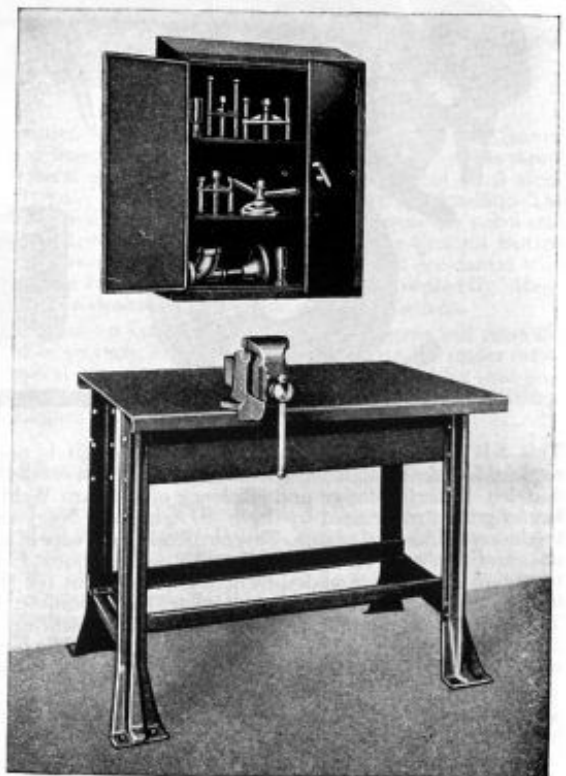
Price \$6.75 Each

\$6.00 lots of 3 or more at one shipment



These new KRW "All-Steel" Wall Cabinets, size 32 1/2" high, 24" wide, 9 3/4" deep, have been designed by Ford Service Engineers especially to decentralize tools and equipment and protect it against loss and damage, as well as time lost hunting for them. The cabinets are strong and durable. All joints are electric welded. Tops, bottoms, and doors are reinforced. Shelves are adjustable. Doors lock at three points. Provision is made for mechanics' own padlock. Sloping top prevents piling with "junk." Average dealer needs 3 to 5 Cabinets. Finished in Equipment RED or GRAY Baked Enamel to match color scheme recommended in March 1935 Ford Service Bulletin.

Service Signs from Sales Equipment Co., Detroit



Mechanics Tool Toters page 4

Larger Size Benches, Drawers, etc.

Design Similar to 106 Shown on previous page
Medium Weight—Width 23 3/4 In.—Height 33 1/4 In.

LENGTH	No. OF LEGS	WEIGHT	KRW PRICE
4 1/2 Ft.	2	142 Lbs.	\$14.50
5 Ft.	2	150 Lbs.	15.70
6 Ft.	2	175 Lbs.	17.70
8 Ft.	3	215 Lbs.	23.25
9 Ft.	3	235 Lbs.	25.25
10 Ft.	3	258 Lbs.	27.60

Steel Drawers Extra

15 x 14 x 5 inches	\$3.00	With Lock	\$4.00
20 x 14 x 5 inches	3.50	With Lock	4.25
24 x 14 x 5 inches	4.00	With Lock	4.75
20 x 20 x 6 inches	5.25	With Lock	6.00

We also have No. 98 KRW Special Axle and Transmission Bench. Top 96 x 42 inches. Made for heavy duty service. Weight 400 lbs. at \$28.50. Also No. 99 a Special Generator and Starter Bench measuring 72 x 29 1/4 x 36 inches high, and equipped with drawer for mechanics tools also several special Brackets for holding Repaired Starters and Generators, at \$23.00. If interested circulars will be sent you on either one.

ALL BENCHES ARE PRICED F.O.B. FACTORY
Jenkintown, Pa.

Floor Patch

A New Plastic Base Material for repairing holes in floors or completely re-surfacing them. Also used for patching Sidewalks, Driveways, etc. Easily applied and ready for use within 24 to 36 hours. Can be used on Concrete, Wood, Metal, Tile or Composition. It is waterproof, fireproof, dustless, noiseless and will not chip or break. Can be laid any thickness down to a feather edge. This material is used by the Maintenance Departments of nearly all leading Automobile manufacturers. Write for Special Circular giving full details, how it is used, prices, etc.

KRW-Milburn Acetylene Welding and Cutting Outfit



This KRW-Milburn Welding and Cutting outfit is one of the finest made. If sold through usual channels, the price would be more than doubled. Superior design and efficiency of Milburn Welding equipment has long been recognized by the U. S. Army and Navy and hundreds of the largest industrial plants. This outfit will take care of any welding job in connection with an automobile. The welding outfit is sold separately to obtain a low price and the cutting attachment for those who want both. The Gauges are the finest quality, large diameter (2 3/4" overall). The pressure regulators are large capacity, measuring approximately 3 3/4" diameter, and are made of bronze forgings. The outfit is complete as shown, including a sample supply of Welding Rod ready to start work.

No. 130B Welding Outfit \$40.00

- 1 Special welding torch with (3) tips.
- 1 Oxygen regulator with two 2 1/2" gauges.
- 1 Acetylene regulator with two 2 1/2" gauges.
- 2 12 1/2 ft. lengths of hose with fittings.

Price Cards

PRINT YOUR OWN PRICE CARDS

No. 451

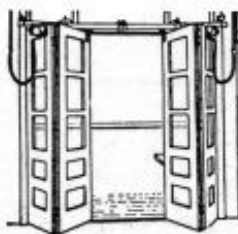
Price \$1.50

Print your own Price Cards—Save time and money. We furnish a set of 3/4", double hair line numbers including dollar and cent characters, also ink pad and two hundred 4 x 2 1/2" bristol board blanks printed with border in Ford Blue.



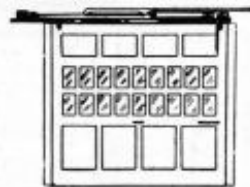
Well dressed displays will sell more Ford parts and accessories when each item has an attractive, uniform style of Price Card on it. Dealers everywhere say this kit is just what they have been looking for. *Shipping Weight 2 Pounds.*

"Air Operated" Door Controls



Save You Time and Money

Write for
Special Circular. Give
Height, Width
and Type of
Doors if You
Want KRW
Prices



- 1 Pyro torch lighter.
 - 1 Pound can combination flux.
 - 1 Bundle welding rods for Alum.-Copper-Brass.
 - 1 Bundle welding rods for cast iron.
 - 1 Wrench for welding torch.
 - 1 Pair goggles.
 - 1 Book of instructions.
- Shipped Direct from Factory—Baltimore*

No. 130C Cutting Attachment \$15.00



This cutting attachment is designed to convert the KRW Milburn Type H. M. S. Welding torch into an efficient cutting torch. This is accomplished by removing the head nut and mixer and inserting the cutting attachment. It will handle practically any kind of light cutting jobs.

KRW "Quick Service" HYDRAULIC JACKS

No. 472

Price \$36.50

F.O.B. Factory, Arcade, N.Y.

They're NEW! The last word in Jack design. Everything you have wanted—speed, easy operation, strength, safety and lifting range. Both 2 and 3-Ton Jacks are positively the most convenient Jacks you have ever handled. They are built long and low to "reach-in" under TODAY'S CARS and TRUCKS equipped with low-down, stream-lined, extended Bodies and Bumpers, Long-nosed Radiators and Dust Aprons. They are equally suited for "Knee-Action" and older models.

SPECIFICATIONS

Capacity—6,000 lbs.
Weight—195 lbs.
Length Overall—7 ft. 3 in.
Length of Chassis—53 in.
Low Point of Axle Pad—4 in.
Highest Point of Axle Pad when raised—24 in.
Travel of Lifting Arm—20 in.
Travel per Stroke—Approx. $\frac{7}{8}$ in.
Length of Handle—42½ in.
Highest Point of Jack Body—6¾ in.
Width of Jack Body—17 in.
Overlap of Handle—8½ in.
Front Casters—¾ in. Ball-bearing swivels
Rear Wheels—4½ in. Crowned; equipped with roller bearings.
Amount of Oil recommended in oil box—1 quart.
Rest Pad—5½ x 5½ in. Curved to fit 1935, 1936 cars.
Fool-proof release valve in hardened steel seat—self-cleaning.

Handle locks in two convenient positions for quick spotting

Lifts
4 to 24 in.

Built to
lift and move
3 tons

KRW 3 Ton Jack

GUARANTEED A YEAR

Actual Comparison of 2 and 3 ton jacks

KRW 2 Ton Jacks

\$26.00



\$24.00

Both Jacks are made from Certified Malleable Iron and Steel throughout. Side frames are well ribbed, braced and tied together with solid castings. No danger of side strain or collapse. Cylinders are reamed and "honed". Pistons are made of hard steel, accurately ground to size. By-pass SAFETY VALVES prevent overloading. The Release Valve, of our own exclusive design, which automatically cleans the valve seat each time the jack is lowered, is trouble proof and fool proof. The Control Button (finger tip control) is located between the handle frames to prevent accidental tripping. It works so perfectly that the Jack (with a load on it) can be lowered by "thousandths of an inch" if necessary—a desirable feature for many operations.

A six-inch stroke will operate them—a full stroke of about 45 degrees will raise the Jack about $\frac{3}{8}$ ths of an inch. Every KRW Jack is "run-in" under maximum load for several hours, on a special machine designed for that purpose, and must hold a full capacity load over night, without settling. Common light Engine Oil is used for Fluid.

No. 471 (Swivel Caster Type) 2 Ton Jack

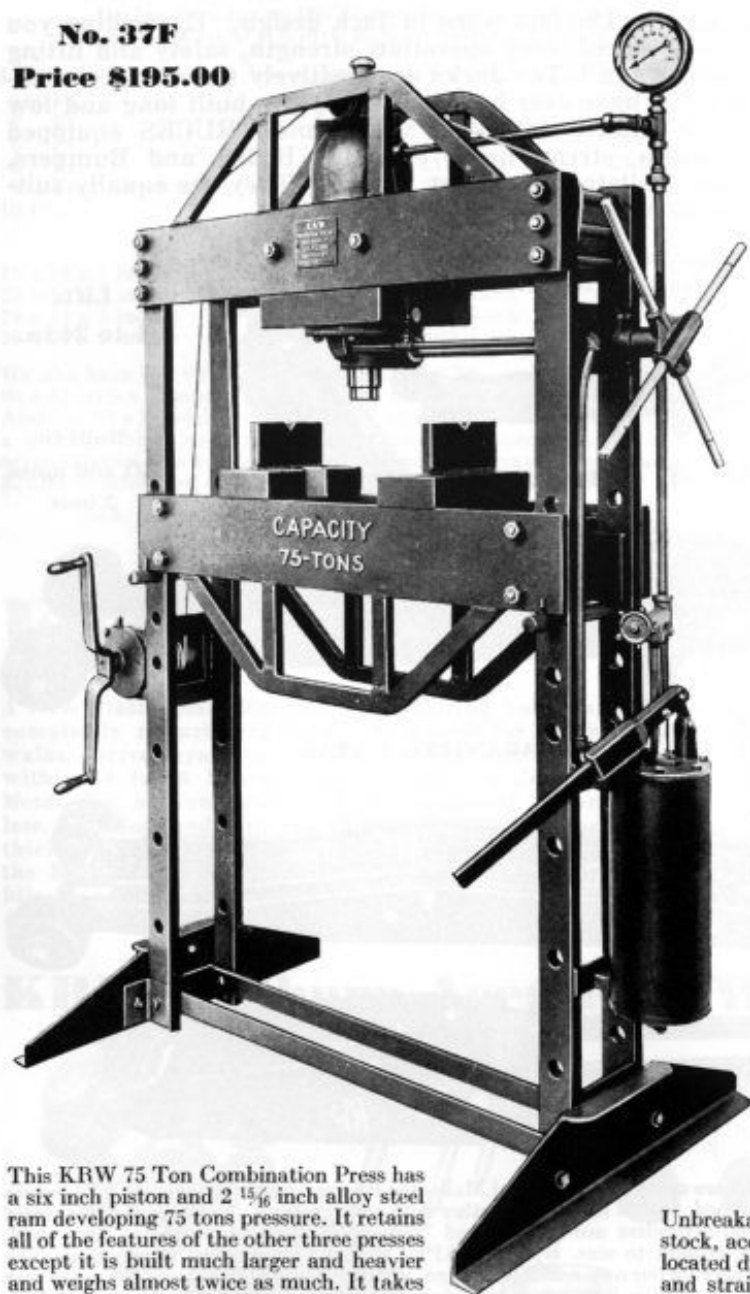
No. 471 (Swivel Caster Type) 2-Ton Jack is designed for general garage use. Capacity—4000 lbs. Weight—110 lbs. Raises to—20½ in. Lowers to—3¾ in. Travel of lifting arm—16¾ in. Length overall—83 in. Length of handle—54 in. Highest point of Jack Body—6 in. Front Wheels—4 in. Crowned. Swivel Casters—2 in. steel, equipped with two lowering springs, swivel Rest Pad and "T" Handle as illustrated.

No. 470 (Plain Wheel Type)

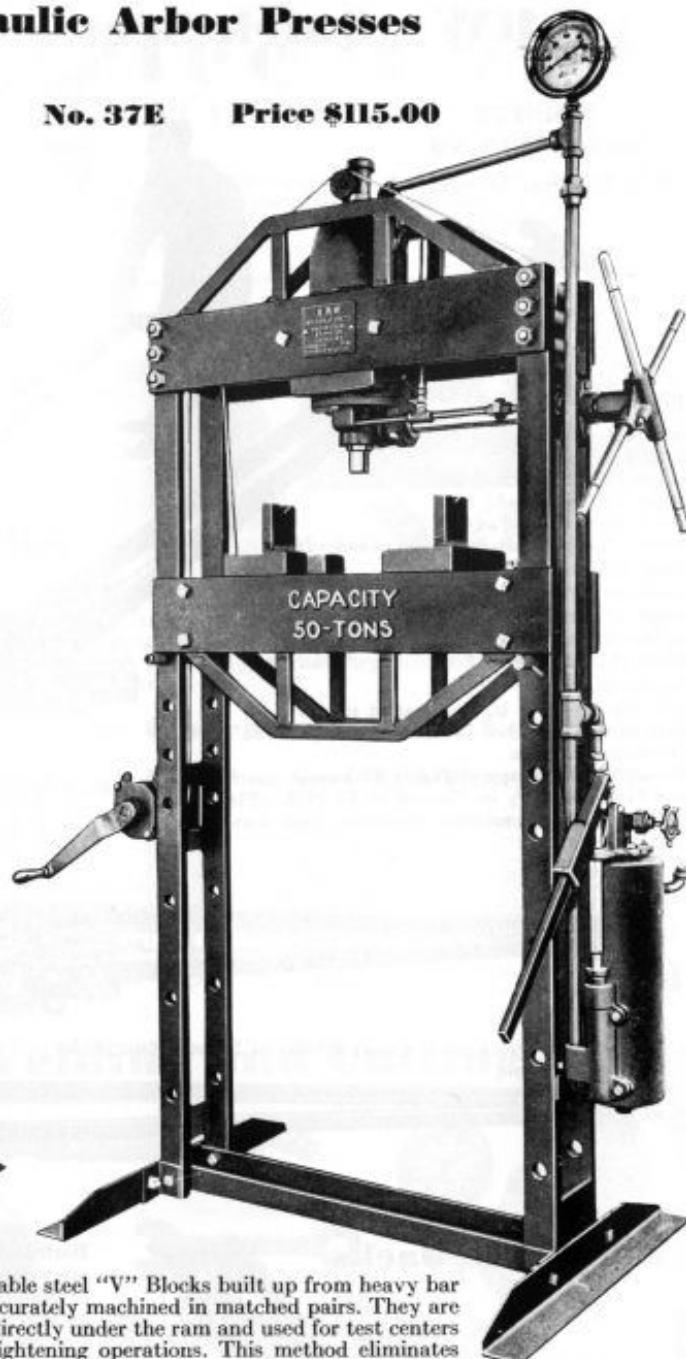
No. 470 (Plain Wheel Type) is designed especially for Curb Service. Equipped with plain wheels, it will not slide sideways on a "crowned pavement" while changing wheels, tires, etc. Equipped with plain Rest Pad, plain Wheels and single Handle as illustrated. Otherwise exactly the same Jack as No. 470.

KRW "Hand Operated" Hydraulic Arbor Presses

No. 37F
Price \$195.00



No. 37E **Price \$115.00**



This KRW 75 Ton Combination Press has a six inch piston and 2 $\frac{1}{16}$ inch alloy steel ram developing 75 tons pressure. It retains all of the features of the other three presses except it is built much larger and heavier and weighs almost twice as much. It takes work up to 42 inches between uprights. Especially suited for Bus and Truck requirements, also Machine Shop use.

Unbreakable steel "V" Blocks built up from heavy bar stock, accurately machined in matched pairs. They are located directly under the ram and used for test centers and straightening operations. This method eliminates all chances for errors due to moving the work from separate test centers to the press and back again. Indicating Dial Gauges can be supplied with clamp to attach to table at \$15.00 complete if desired.

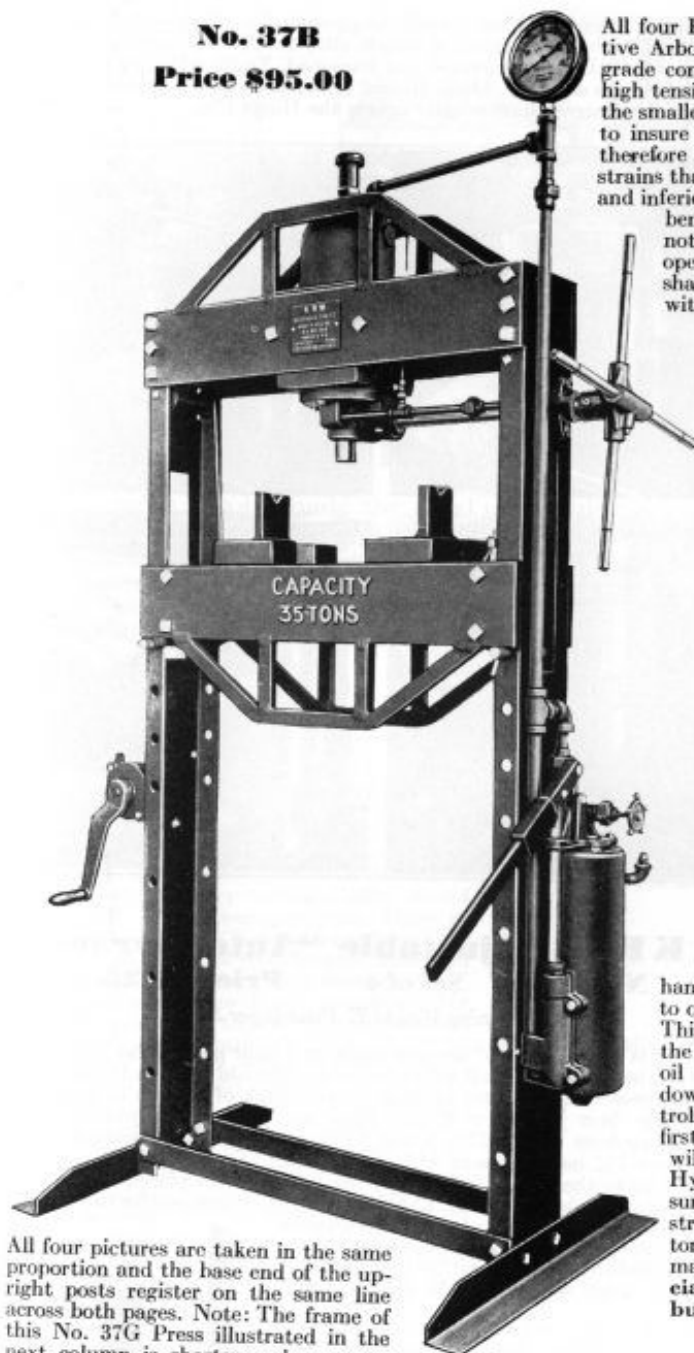
Hand Operated 75 Ton Press Specifications—No. 37F

SIDE MEMBERS	4 Steel posts 72"x3"x1 $\frac{1}{4}$ "
TRUSSED TOP PLATES	48"x7"x1" (trusses 1 $\frac{1}{8}$ "x1")
TRUSSED TABLE PLATES	48"x7"x1" (trusses 1 $\frac{1}{8}$ "x1")
TIE BARS	48"x2"x $\frac{3}{8}$ "
BASE MEMBERS	Channel iron 7"x36"
PRESSURE BLOCKS	11 $\frac{3}{4}$ "x6"x2 $\frac{1}{2}$ " (V on one side)
DIAMETER OF RAM	2 $\frac{1}{16}$ " (Alloy steel)
CYLINDER	Semi-steel
PISTON	6" Diameter, Drop Forged
TABLE PINS	1 $\frac{1}{4}$ " Nickel steel
HEIGHT OVERALL	81"
TABLE TRAVEL	35"
RAM TRAVEL	7 $\frac{1}{2}$ "
INSIDE WIDTH	42"
OPENING IN SIDES	6 $\frac{3}{4}$ "
SPACE BETWEEN TABLE	9 $\frac{1}{4}$ "
SHIPPING WEIGHT	1,790 lbs.
PRICE	\$195.00
GAUGE AND FITTINGS	\$15.00 extra
F.O.B. FACTORY	Arcade, N. Y.

Hand Operated 50 Ton Press Specifications—No. 37E

SIDE MEMBERS	4 Steel posts 72"x2 $\frac{1}{2}$ "x1"
TRUSSED TOP PLATES	36"x6"x $\frac{3}{4}$ " (trusses 1 $\frac{1}{4}$ "x $\frac{3}{4}$ "
TRUSSED TABLE PLATES	36"x6"x $\frac{3}{4}$ " (trusses 1 $\frac{1}{4}$ "x $\frac{3}{4}$ "
TIE BARS	36"x2"x $\frac{3}{8}$ "
BASE MEMBERS	Angle iron 30"x3"x $\frac{1}{4}$ "
PRESSING BLOCKS	8 $\frac{3}{4}$ "x6"x2" Steel (V on one side)
DIAMETER OF RAMS	2 $\frac{1}{4}$ "
CYLINDER	Semi-steel
PISTON	5" Diameter, Drop Forged
TABLE PINS	1" Hercules steel
HEIGHT OVERALL	82"
TABLE TRAVEL	40"
RAM TRAVEL	7 $\frac{1}{2}$ "
INSIDE WIDTH	31"
OPENING IN SIDES	5"
SPACE BETWEEN TABLE	7 $\frac{1}{8}$ "
SHIPPING WEIGHT	980 lbs.
PRICE	\$115.00
GAUGE AND FITTINGS	\$15.00 extra
F.O.B. FACTORY	Arcade, N. Y.

No. 37B
Price \$95.00



All four KRW Combined, Hand Operated Hydraulic and Sensitive Arbor Presses represent the last word in design and high grade construction. They are made from the best, hard rolled, high tensile strength, steel bars and plates obtainable. All except the smallest are re-inforced with electrically welded steel trusses to insure maximum strength and rigidity. They will therefore handle larger loads and stand much greater strains than competitive presses of lighter weight and inferior construction, which often buckle and bend out of shape. All holes are drilled, not punched. The Side Members are open to facilitate handling of long bars, shafts, axles, etc. They are equipped with "one man" lifting device so that the

work table can be raised easily, with one hand, to eight convenient heights. The Sensitive press is "built in," at no extra cost, as a part of the Hydraulic Ram which therefore increases its working dimensions to the same size as the Hydraulic. The Hand Wheel on the side is connected to the Hydraulic Ram by a rack and pinion arrangement which permits the same ram being used as a "sensitive" press developing 3 to 5 tons pressure, which is especially desirable for light pressing operations such as removing and replacing bronze bushings, bearing races and light straightening operations.

The sliding handles pull out to the end, to obtain maximum leverage. This same mechanism fills the hydraulic cylinder with oil as the ram is brought down to work, then the control valve is closed and the first stroke of the hand pump will apply 8 tons Hydraulic pressure, the second stroke about 15 tons, etc., until maximum pressure is developed. Write for special circular on Hydraulic Presses. We also build special sizes to order.

No. 37G
Price \$85.00



All four pictures are taken in the same proportion and the base end of the upright posts register on the same line across both pages. Note: The frame of this No. 37G Press illustrated in the next column is shorter and narrower than the others, however the working parts are identical with those used in 35 and 50 ton sizes.

Air Operated 35 Ton Press Specifications — No. 37B

SIDE MEMBERS	Heavy channell iron 7"
TRUSSED TOP PLATES	36"x6"x3/4" (trusses 1 1/4"x3/4")
TRUSSED TABLE PLATES	36"x6"x3/4" (trusses 1 1/4"x3/4")
TIE BARS	36"x2"x3/8"
BASE MEMBERS	Angle iron 30"x3"x1/4"
PRESSING BLOCKS	Steel 8 3/4"x6"x2" (V on one side)
DIAMETER OF RAM	2"
CYLINDER	Semi-steel
PISTON	5" Diameter, Drop forged
TABLE PINS	Hercules steel 7/8"
HEIGHT OVERALL	82"
TABLE TRAVEL	40"
RAM TRAVEL	7 3/4"
INSIDE WIDTH	32"
OPENING IN SIDES	2 1/8"
SPACE BETWEEN TABLE	7 1/8"
SHIPPING WEIGHT	880 lbs.
PRICE	\$95.00
GAUGE AND FITTINGS	\$15.00 extra
F.O.B. FACTORY	Arcade, N. Y.

**Small Hand Operated 35 Ton Press Specifications
No. 37G**

SIDE MEMBERS	7" Heavy channell iron
TRUSSED TOP PLATES	28"x6"x3/4" (Trusses 1/4"x3/4")
TRUSSED TABLE PLATES	28"x6"x3/4" (Trusses 1/4"x3/4")
TIE BARS	Steel 28"x2"x3/8"
BASE MEMBERS	Angle iron 30"x3"x1/4"
PRESSING PLATES	Steel 8 3/4"x6"x2" (V on one side)
DIAMETER OF RAM	2"
CYLINDER	Semi-steel
PISTON	5" Diameter, drop forged
TABLE PINS	Hercules steel 7/8"
HEIGHT OVERALL	78"
TABLE TRAVEL	36"
RAM TRAVEL	7 1/2"
INSIDE WIDTH	24"
OPENING IN SIDES	2 1/8"
SPACE BETWEEN TABLE	7 1/8"
SHIPPING WEIGHT	760 lbs.
PRICE	\$85.00
GAUGE AND FITTINGS	\$15.00 extra
F.O.B. FACTORY	Arcade, N. Y.

KRW "Bench Type" Arbor Press No. 37D

Price \$22.00

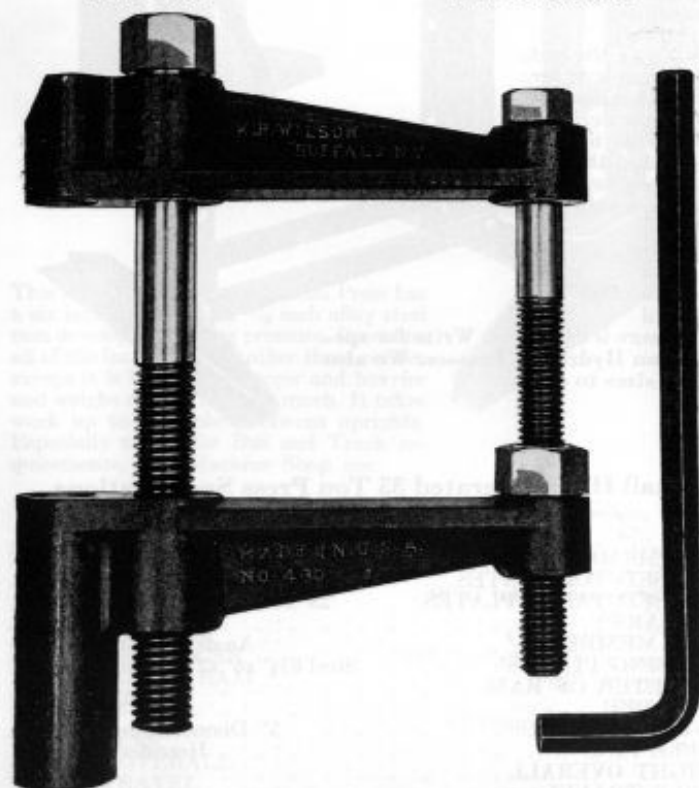
Hundreds of jobs now being done with vises and sledge hammers can be done much better and in a workman-like manner with a K R W Bench Press. Good shops consider them a necessity. Consider the time they will save you and the cost will soon be forgotten. The K R W Press is oversize in every particular. Throat is extra deep, taking work up to 13 inches in diameter. Ram is $1\frac{1}{2} \times 1\frac{1}{2} \times 17$ inches. Largest Arbor is $1\frac{5}{8}$ inches. Height $22\frac{1}{2}$ inches. Takes up a space of 8 x 20 inches. Can be conveniently mounted on end of bench.

Shipping Weight
140 Pounds

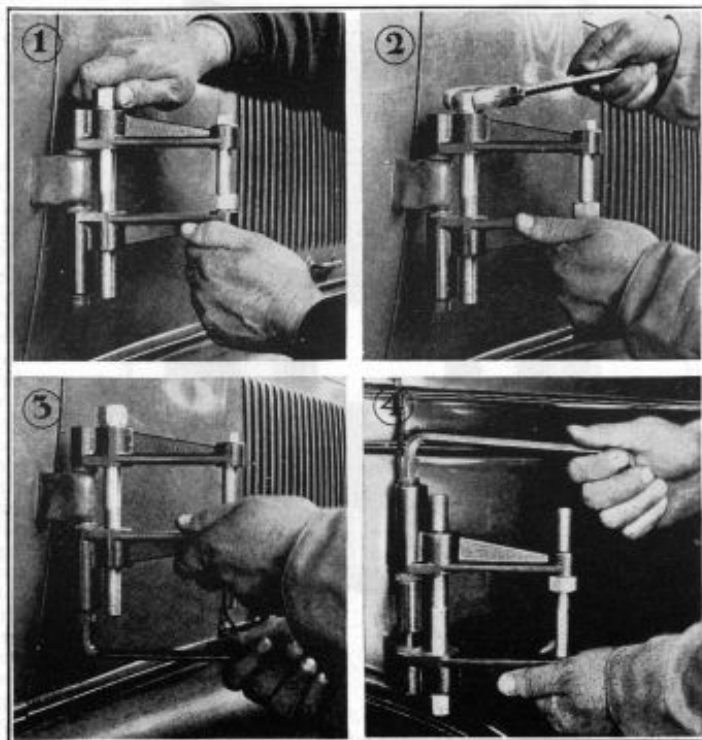


★ KRW Hinge Pin Press No. 430

Price \$7.50



The KRW Hinge Pin Press is built strong enough to do the job and stand the "gaff." Frame is made of tough alloy steel, drop forgings, other parts of tool steel, heat treated and hardened. Easily adjusted to fit all sizes of Hinges and Pins. Many Hinges, doors and frames are ruined from using a hammer—which usually upsets the Hinge Pin.



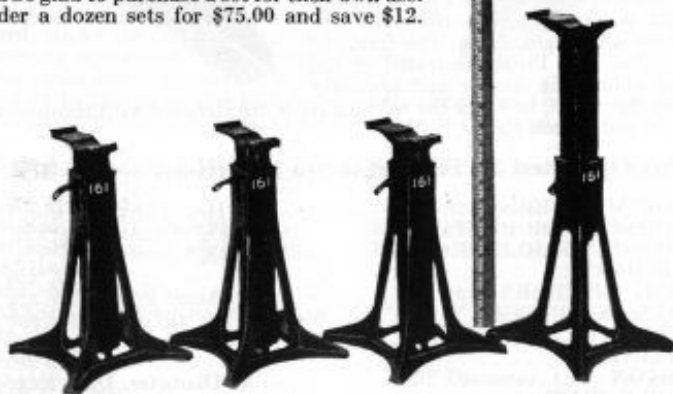
KRW Adjustable "Auto Horses No. 161

Set of 4

Price \$7.25

Shipping Weight 27 Pounds per Set

The KRW "Auto Horses" are now made on a large production basis and sold so cheap you can well afford to discard the old wooden blocks and "saw horses" which clutter up most shops. Think of it: a set of four all-malleable iron jacks for \$7.25. They are instantly adjustable by half inches from $11\frac{1}{4}$ to $17\frac{1}{2}$ inches, by just lifting up the standard. The bases are $7\frac{1}{4}$ inches square with disc ground "Flat Feet". The car is jacked up to the desired height and the KRW horses placed under the frame of axle to be supported. Every shop needs several sets for use under wrecks, cars being painted, brakes relined or winter storage. Many of your own customers will be glad to purchase a set for their own use. Order a dozen sets for \$75.00 and save \$12.

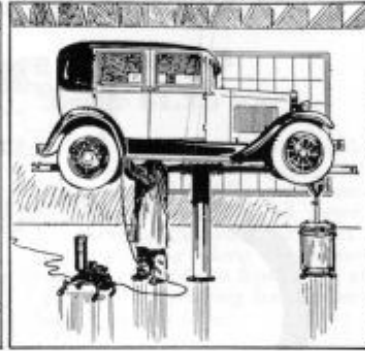
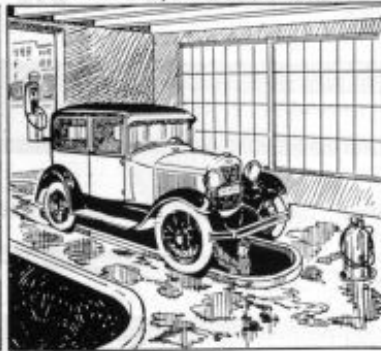
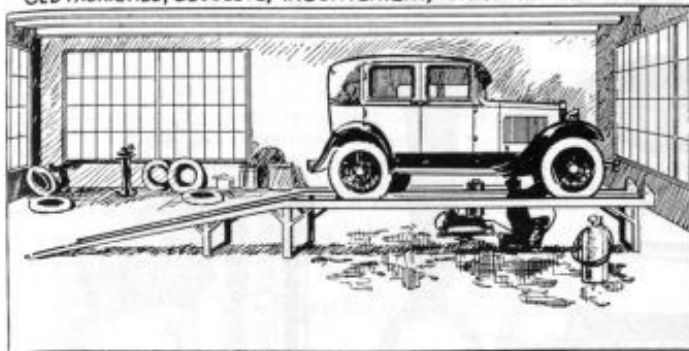


LUBRICATION

OLD FASHIONED, OBSOLETE, INCONVENIENT, SPACE-WASTER

DANGEROUS, DIRTY, UNHANDY

CLEAN, CONVENIENT, EFFICIENT



A GOOD LUBRICATION

Department can be made the most profitable part of your business . . . with unlimited possibilities. Study these cartoons: they will show you how to build customer confidence and fill your shop with profitable repair work.

Lubrication Profits

300 Car Dealer	\$13,500
500 Car Dealer	22,500
1000 Car Dealer	45,000
1500 Car Dealer	67,500
2000 Car Dealer	90,000

These figures are just an example of what can be done in one department of your service station. If a dealer has sold 300 cars per year for three years, he should be servicing at least two-thirds or 600 cars, which, if lubricated every month or every thousand miles, would mean 7200 lubrications per year. These at \$1.00 each for a real "honest-to-goodness" job would mean \$7200.00 gross income from paid lubrications. The new "Free Service Plan," applicable to the new Fords, means another \$900.00. In addition to this, most of these cars need oil changes monthly, totaling 10,800 oil changes for the year, using 13,500 gallons of oil, which if purchased in reasonable quantity should net a profit of 75c per car for each change, or another profit of \$8,100.00. After paying three men \$4.00 per day, leaves a gross profit of at least \$13,500.00 from the Lubrication Department. Larger dealers should profit in proportion. Profits from lubrication of wheels, transmission, differentials, etc. (not included in above estimate) will pay all other operating expenses and part of the shop overhead.

But this is only the beginning. Still larger profits come from the increased value of

Repair Orders and larger volume of business—a result of FREE SAFETY INSPECTION. Today, with cars being driven at faster than express train speeds, frequent inspection and repairs are necessary. Customers appreciate and will go out of the way to get this unusual, preventative, service. Go get the business lost to your competitors. See page 76.

Judge Motor Corporation of Rochester, N. Y., Goes After Lubrication Profits

1929	6136 jobs
1930	12809 "
1931	15845 "
1932	19782 "
1933	21698 "
1934	29675 "
1935 (10 months) more than	33000 "

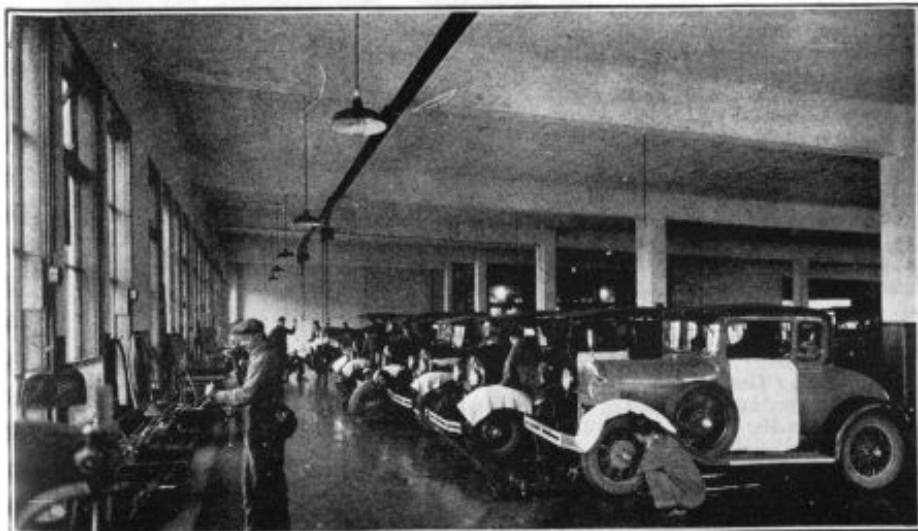
Averaging more than 115 lubrications daily for first 10 months of 1935. Selling more than 40 tons of grease during the same period.

FREE SERVICE INCLUDED. Windows, body and fenders are wiped off. Upholstery and floor mats vacuum cleaned.

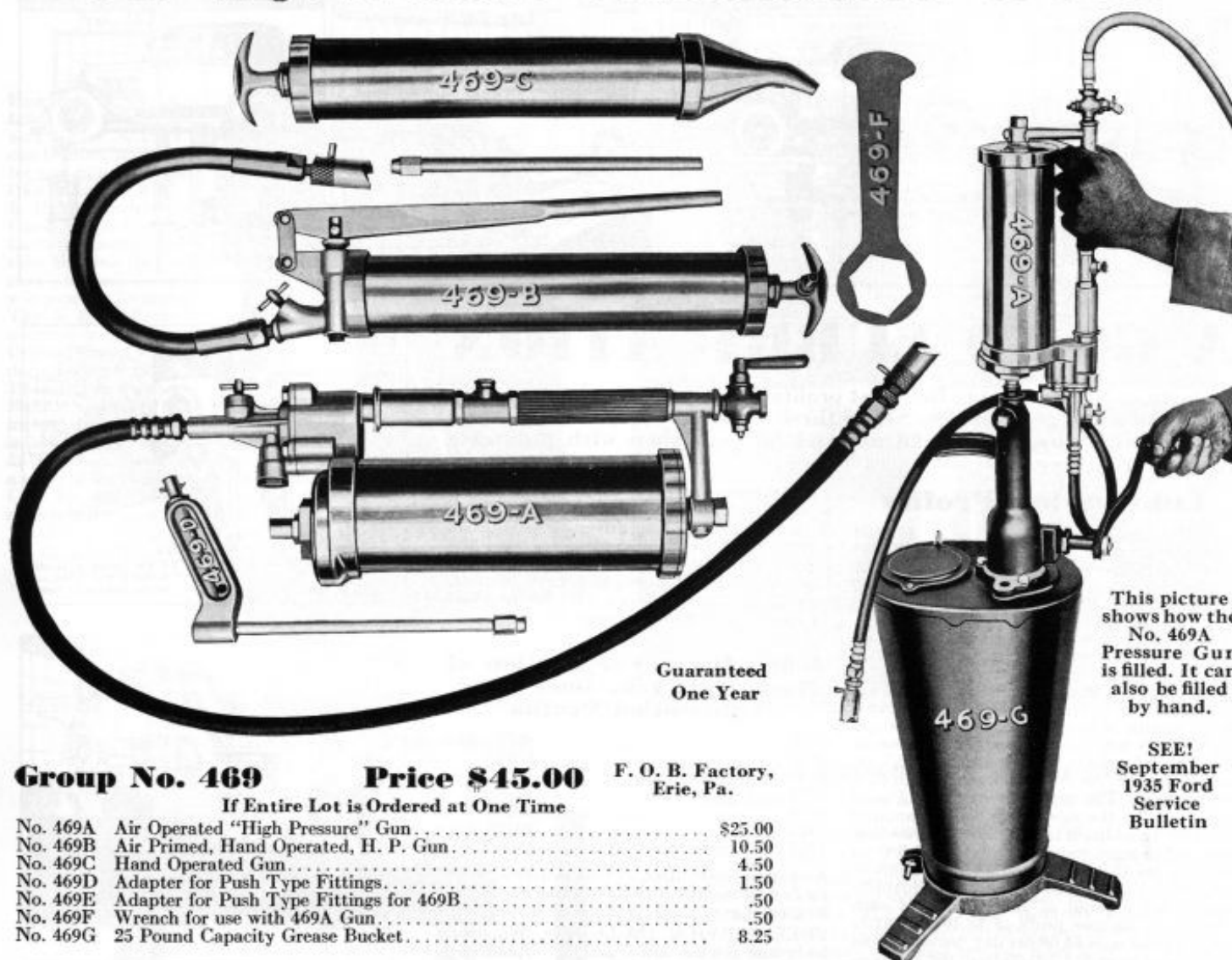
24 HOUR SERVICE—including Sunday.

Their SLOGAN: "If we miss one fitting in greasing your car there will be no charge for the job."

A neat, clean shop, like the one pictured below, will make a favorable impression on customers.



OK "High Pressure" LUBRICATION OUTFIT



Guaranteed
One Year

This picture
shows how the
No. 469A
Pressure Gun
is filled. It can
also be filled
by hand.

SEE!
September
1935 Ford
Service
Bulletin

Group No. 469

Price \$45.00

F. O. B. Factory,
Erie, Pa.

If Entire Lot is Ordered at One Time

No. 469A	Air Operated "High Pressure" Gun	\$25.00
No. 469B	Air Primed, Hand Operated, H. P. Gun	10.50
No. 469C	Hand Operated Gun	4.50
No. 469D	Adapter for Push Type Fittings	1.50
No. 469E	Adapter for Push Type Fittings for 469B	.50
No. 469F	Wrench for use with 469A Gun	.50
No. 469G	25 Pound Capacity Grease Bucket	8.25

The No. 469A OK "Air Operated" Grease Gun is the most efficient and economical equipment available for high pressure lubrication. It will positively handle any grade of Lubricant. Consumes only one cubic foot of air per minute—therefore, operates from any size Air Compressor having that capacity or larger and at any pressure above 75 pounds. With 125 to 150 lbs. air pressure the Gun operates at approximately 400 to 600 shots per minute, developing 6000 to 8000 pounds at the nozzle, enough to drive grease through the tightest fittings. The air leverage is 35 to 1. Its simple, rugged construction and perfect balance make it easy to handle and operate. Weight—5½ lbs. The picture on the right shows how it is carried like a small handbag, while the Pistol Grip adapter for Push Type Fittings is used in the right hand. A 3 ft. Whip end Hose, (tested at 10,000 lbs. pressure at the factory), is equipped with a Connector for the Pin Type Fittings, and connects to the adapter handle for Push Type Fittings in the same way. It is also equipped with Pressure Release Valve. The Gun is of simple construction—nothing to wear out except one leather washer used on the piston, which can be replaced in two minutes should it require replacement after years of service. See picture of Grease Bucket on the right. This shows how the Gun is refilled,—a ten second operation. The operator places the Gun over a tapered fitting and turns the crank on the Grease Bucket a couple of turns and the Gun is filled. Not a drop of grease is spilled or wasted,—no mess to clean up. A check valve in the Gun prevents any dripping. Thousands of users all over the world, many of whom have discarded more elaborate and expensive equipment because some of it was too messy, claim this is the handiest and most satisfactory outfit they have ever used.

The No. 469B "Air primed barrel," 20 oz. capacity, hand operated Grease Gun handles all types of greases including universal and water pump. It is ruggedly designed and very accurately made. It develops 8000 pounds pressure. Has check valve and Pressure Release built in the nozzle. High pressure unit sealed against leaks by adjustable packing nut. Magazine has automatic air exhaust. Comes completely equipped with 18 inch whip end hose, including adapter for Pin type Fittings, and when desired for Push type Fittings use adapter No. 469E in place of hose. Weight—4 lbs. 10 oz. You need this Gun for universal joints and for emergency use.

The No. 469C hand operated gun with 20 oz. capacity is especially designed for Steering Gears, Differentials and Transmissions. It is the best constructed hand gun on the market. Size of barrel, 11½x 2¼". Weight 2 lbs. 2 oz. Every dealer needs two or three of this type gun around his lubrication department.

Continued on next page



Continued

All these guns are made of heavy brass tubing and aluminum alloy die castings, plated and highly polished.

The No. 469D Adapter for push type fittings has a pin type connector on its handle, to fit the connector on the whip end hose. The adapter fits practically every push type fitting used on automobiles. The Pistol grip handle is an aluminum alloy die casting.

The No. 469G 25 pound capacity grease bucket is similar to many others on the market except this has less hose, but is equipped with a special fitting having a female tapered joint that just matches the male fitting on the No. 469A gun. If you already have a similar grease bucket, these fittings can be furnished separately for \$1.50.

KRW Spring Sprayer

No. 162

Price \$17.50

Shipping Weight 115 Pounds

Look it over! We think the KRW Spring Sprayer is just about the best outfit ever put on the market. It has been designed to use any penetrating oil or heavier oils. It can also be used for engine and chassis cleaning. The tank is 7 gallon capacity, made of heavy steel plate, welded construction, tested at 300 pounds pressure. Regulating valve on the handle enables the operator to obtain anything from a fine to a coarse stream with oil of any consistency. The hand lever is simply a gate valve and does not change the adjustment. The truck with single handle is of neat design and very convenient. 20 feet of oil proof hose is included. COMPARE this outfit, then KRW price with all others.



Milburn Spring Sprayer and Engine Cleaning Gun

No. 129

Price \$6.50

The Milburn Gun will handle any spring penetrating oil or a home made mixture of kerosene and cylinder oil for lubricating springs shackles, brake rods, cams etc. or kerosene alone for cleaning the engine. After being thoroughly cleaned, air alone can be put thru it for drying. This sprayer is extra well built. Designed for convenience of the operator. Easily regulated by a slight turn of the nozzle from a cutting stream to a mist or air only. They are good!

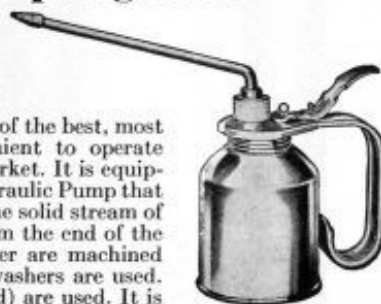


Huffman Spring Oiler

No. 501

Price \$1.00

The Huffman spring oiler is one of the best, most economical to use and convenient to operate spring oilers ever put on the market. It is equipped with a thumb operated, Hydraulic Pump that is so powerful it will deliver a fine solid stream of light oil 16 feet straight out from the end of the nozzle. The cylinder and plunger are machined and ground to fit. No leather washers are used. Ball check valves (copper plated) are used. It is designed especially for oiling auto springs, brake cam shafts and rods and other inaccessible parts as well as removing body squeaks. Uses any light oil or penetrating oil (without graphite). Needs no air line. Mr. Dealer, you can use 2 or 3 of them to great advantage.



Huffman Radiator Filler

No. 163

Price \$1.25 Each



The Huffman Radiator Filler is made of best black steel, corrugated for extra strength and hotdip galvanized after assembly—rust and leak proof. Spout hooking downward, "stays put" in radiator opening—deep shouldered spout causes contents to flow easily at slight elevation. Swinging handle and vertical rear pouring handle permits of quick, convenient handling. *Shipping weight 6 lbs.*

Huffman "Five Quart" Oil Cans

No. 134B

Price \$3.50

This five quart "Spill proof" Measure has been especially designed for oil service and carries the correct amount for a change of oil, saves Mechanics' time making a second trip, prevents forgetfulness in putting in that last quart. The flexible Spout will not unwrap and leak oil. Thumb control operates Valve. It is well made and of durable construction.



Huffman "Oily Waste" Cans

Approved by Underwriters Laboratories

No. 135

Price \$12.00

Per Crate of Three

Reduce your insurance rates and fire hazard by installing underwriters approved Oily Waste Cans. You are paying plenty in the form of insurance premium if you are not using cans of approved design. Made of heavy steel, corrugated and galvanized. The lid is firmly attached and closes automatically unless purposely held open. The overlapping lid makes it airtight and fireproof. Capacity 6½ gal. *Shipping weight, 36 lbs. crated.*



Huffman Drainol Tanks

For Draining Oil, with Car on Lift

No. 150

Price \$14.00

"Something worth while." Saves its cost by preventing the oil from spattering on the floor and attendant's clothes. Helps keep clean. Capacity 13¼ gallons. Mounted on 4 heavy 2-inch casters for convenient handling. Funnel is equipped with screen to catch engine drain plug and foreign particles. Height, lowered 45 in., raised 72 in. Tube locks at any height.



Amesco Tire Gauge

No. 172

Price \$8.50

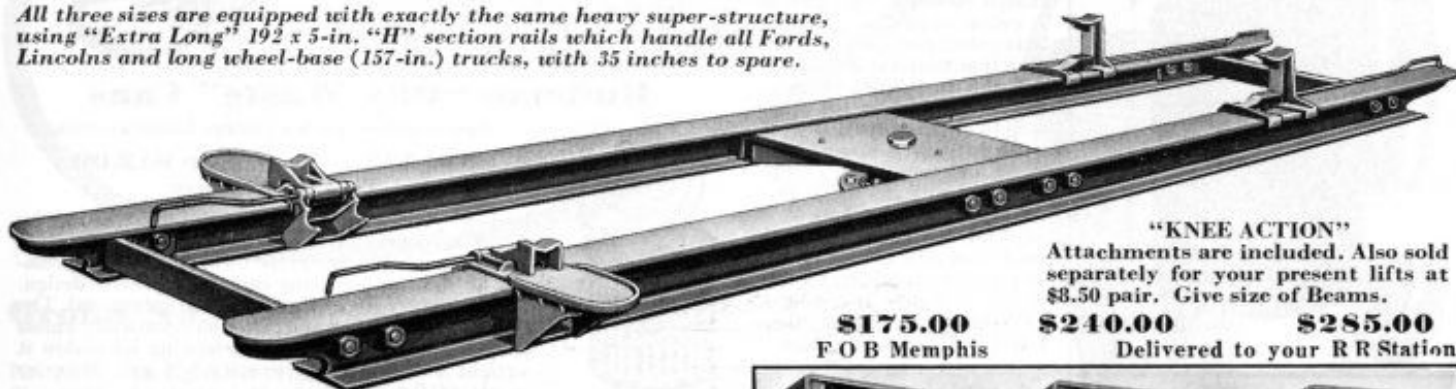


We have sold AMESCO Tire Gauges for the past 5 years and do not hesitate to say "We think they are the Last Word in Tire Gauges," for accuracy and all around dependability. This new Type registers all pressures from zero to 120 lbs. regardless of temperature, summer or winter, wet or dry. It inflates or deflates at a touch. Pressure shows in big Red figures on a single Dial. It is a precision built tool in every detail. UNCONDITIONALLY GUARANTEED ONE YEAR. You need two or three. Your customers will appreciate them.



KRW-Rotary "Free Wheel" Lifts For Lubrication, Car Washing, Inspection

All three sizes are equipped with exactly the same heavy super-structure, using "Extra Long" 192 x 5-in. "H" section rails which handle all Fords, Lincolns and long wheel-base (157-in.) trucks, with 35 inches to spare.



"KNEE ACTION"

Attachments are included. Also sold separately for your present lifts at \$8.50 pair. Give size of Beams.

\$175.00
F O B Memphis

\$240.00

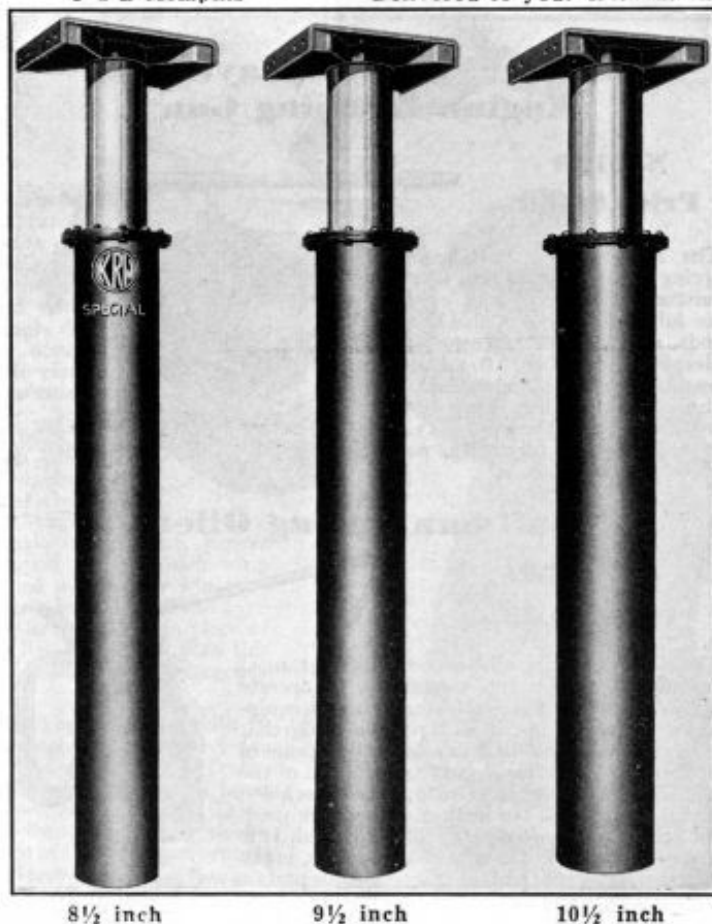
\$285.00

Delivered to your RR Station

The Dealer whose shop is equipped with "Free Wheel" type Hydraulic Lifts has a decided advantage over competitors using pits, ramps or other kinds of drive-on-type lubrication Racks. A thorough job cannot be done unless the Wheels are free. In these days of high speed driving a "Safety Inspection" should be made on every car that comes into your shop for Lubrication, Car Washing or repairs of any kind. It will pay big dividends, not only in Customers' confidence in YOUR SHOP, but usually on immediate orders for Repairs and adjustments as a result of this Inspection. In a day's work there are many jobs that can be done easier and quicker on a free wheel Lift—a car can be raised to any convenient height to change wheels or tires, inspect and adjust brakes, check and repair steering gears, fenders and dozens of other jobs too numerous to mention. Cars can be washed quicker, cleaner and—all over. No investment of 5 times the cost of a few extra Lifts will pay such large dividends as you can save on labor, because your mechanics will work with a greater interest and increased production. KRW-Rotary Lifts are made by the ROTARY LIFT COMPANY of Memphis, Tenn., originators and patentees of Hydraulic Automobile type Lifts, and who are incidentally the largest exclusive Lift manufacturers in the world. All three sizes are built exactly alike, except for the difference in diameter of the plunger. An extra long, 26 inch Guide Bearing insures smooth operation. The Plunger is all steel and accurately ground to close dimensions. It is fitted so perfectly that without any rails the Plunger will go down smoothly by its own weight. All three have the same heavy super-structure and extra long "H" Section (192 x 5 inch) Rails which handle the longest cars and (157 inch wheel base) Trucks, with 35 inches to spare,—an important feature because most Trucks are out-of-balance if centered between axles.

KRW-Rotary Lifts were the first to be UNDERWRITERS APPROVED. The 8½ Inch KRW Special is rated at 6000 lb. capacity, 9½ and 10½ at 7500 lb. for safe operation. We can also supply a SPECIAL TRUCK and BUS Lift, capacity 14,000 lbs. with a 12½ inch Plunger, 18 ft. x 6 inch Rails, at \$473.50, and a still larger, Twin Plunger Type (two 10½ inch Plungers) with 20 ft. Beams, at \$496.00 Delivered to Railroad destination.

**NO OTHER EQUIPMENT IS CAPABLE OF BRINGING
AS MUCH BUSINESS TO YOUR SHOP**



8½ inch

9½ inch

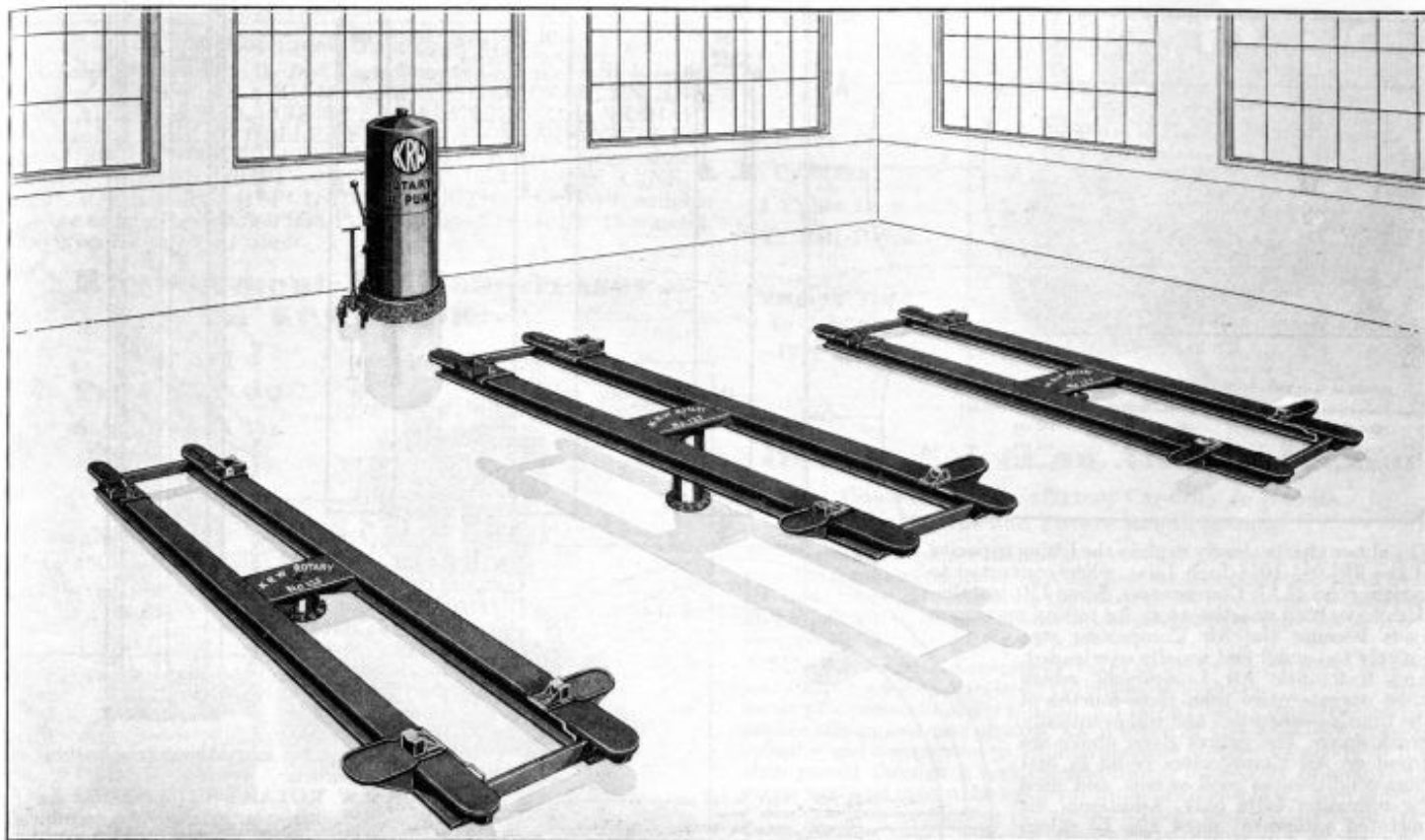
10½ inch

NOW dealers can buy 3 HYDRAULIC LIFTS— \$660.00 and NEW ELECTRIC OIL PUMP for only

One Lift and Pump \$330.00

2 Lifts and Pump \$505.00

FOB Factory, Memphis, Tenn.



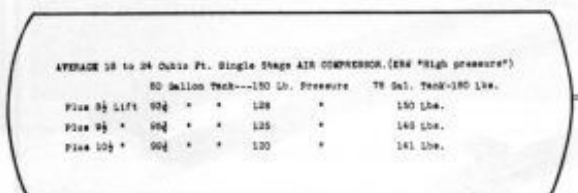
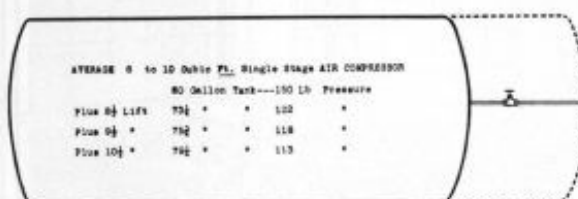
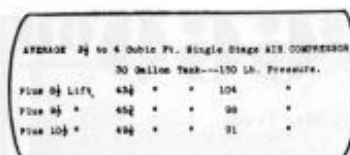
KRW Rotary Electric Unit No. 507 Price \$175.00

With 2 H.P., 60 Cycle Motor
F.O.B. Factory, Memphis, Tenn.

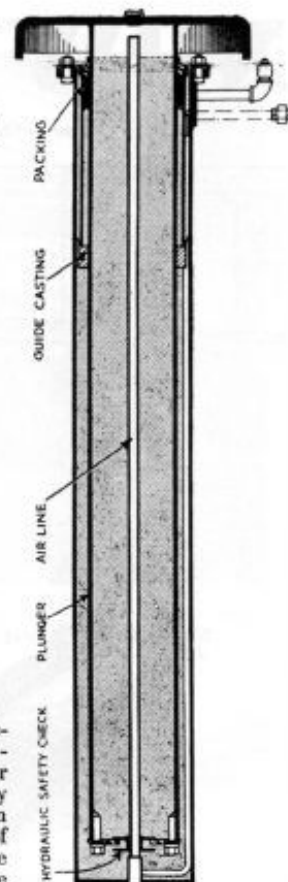
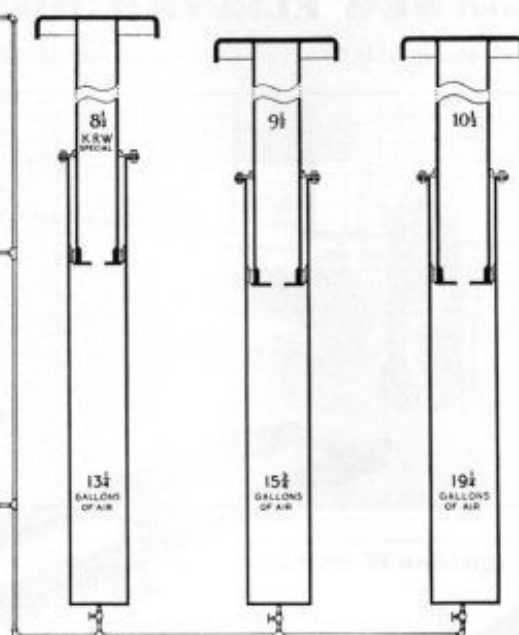
This Picture Shows a Typical Installation of Three KRW Rotary Lifts. Many Dealers Use Them for Lubrication, Inspection, Car Washing and Repair Work

Here's a new idea for Multiple Lift Installations. Offers greater speed, increased safety and costs only one-third as much to operate,—and at KRW Prices, only about half as much to install, because this "high pressure," self-contained, Electric Pumping Unit enables the Dealer to use less expensive KRW-Rotary 8½ inch Special Lifts instead of the larger sizes. It is recommended for single, dual and triple Lift installations. The load is always supported on a solid column of oil—no air is used. A 3 or 4 Way Selecting Valve provides separate control for each Lift, as illustrated above. To operate the Lift, turn the Selecting Valve to the proper position for the lift you wish to raise, then move the Control Handle on the Electric Unit to start the Motor. This permits one or more Lifts being UP at the same time, but as only one Lift at a time can be operated, prevents the possibility of a Lift being operated unexpectedly. The Load is full "oil locked" at all heights and can be raised or lowered in 30 seconds or just a fraction of an inch if desired, to secure most convenient operating heights. Rotary Pump is made with very accurate herring-bone cut steel gears. Pump is connected to motor through a silent Universal Joint. Capacity, 35 gallons per minute. Valves are built into a removable assembly and are readily accessible. A Protective Device is built into the Pump to prevent overloading the Lift,—as soon as the Lift reaches full height the oil is by-passed back to the Tank, even if the Motor should continue to operate. The EXTRA TANKAGE and SELECTING VALVE required for operating 2 or 3 Lifts is furnished without charge when ordered with a corresponding number of Lifts. The 2 HP Vertical Ball Bearing Motor is designed especially for the job. It has high starting torque and great overload capacity. It is also protected against low voltage and overloads with Thermal Relays which disconnect the power with the slightest overheating of the motor, and restores the connection when it has cooled. Motor supplied is 60 Cycle, 110-220 Volt, Single Phase, Repulsion-Induction Type, or a Three Phase, 220-440 Volt. Other frequencies will be furnished to order, at slightly additional costs. Easy to install—just install the Lifts in the same manner as for "air operation," then connect a 1¼ inch pipe from the pumping unit to the Selecting Valve and from there with another pipe to each Lift. There is nothing complicated to cause trouble or get out of order. KRW-Rotary 8½ Inch Special Lifts will give perfect satisfaction and lift about the same capacity loads when operated with this "high pressure" Electric Oil Pump as a 10½ Inch, Air operated Lift will raise when operating on 150 lbs. pressure, and now for the SAVINGS—Example: 3 Large 10½ Inch Air operated Lifts and a 20 Cubic Ft. Air Compressor would cost you about \$1,377.00 if purchased through a Jobber, \$1,140.00 if purchased from K. R. Wilson, as compared with 3 KRW-Rotary 8½ Inch Special Lifts with Electric Oil Pump, Valves and Extra Tankage at a cost of \$660.00, FOB Factory, Memphis, Tenn., SAVING almost half on the original cost, and two-thirds on the operating cost. Electric units can be equipped with Tankage capacity for 2 or 3 Lifts at \$10.00 extra, for future additions, for use on KRW-Rotary Lifts of any size, built for air operation, which were purchased from the factory since 1932. If interested, write for Special Hydraulic Lift Catalog. Also note Easy Payment plan on inside back cover page.

Every car sold must be serviced! — Get your share.



Figures shown on these diagrams and accompanying data are only approximate, and to be used for the purpose of comparison only.



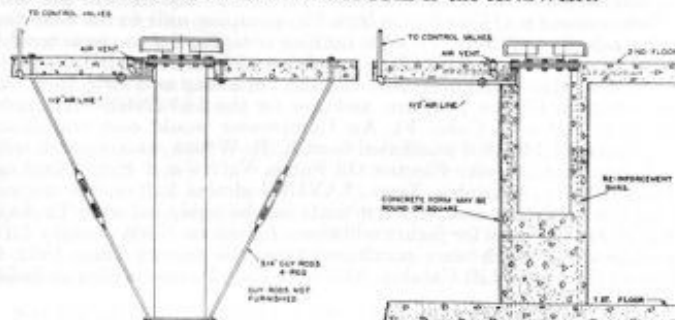
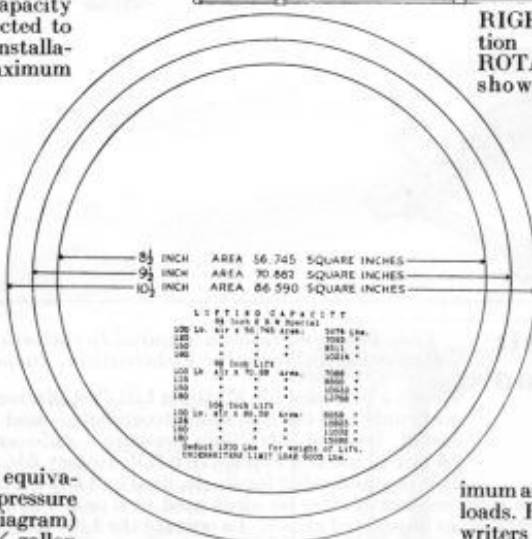
RIGHT — A cross section of the K R W - ROTARY Lift Cylinder showing the Safety

Check Valve in the bottom of the Plunger; the Bearing Guide has been lengthened to 26-inches long. Absolutely nothing to get out of order.

KRW ROTARY LIFT IS SAFE

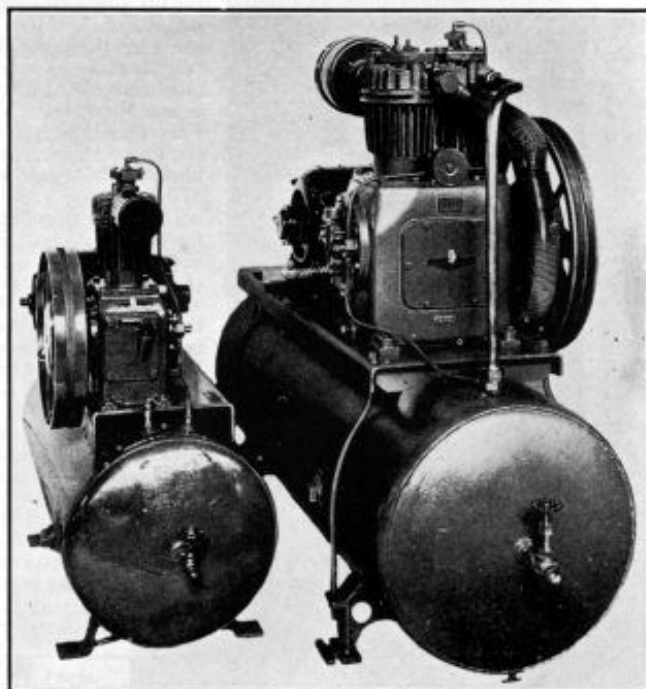
The load is always supported on a column of oil. Upward and downward movements are pre-determined and positively controlled by the Patented Hydraulic Safety Check located in the bottom of the plunger where it cannot be tampered with. With proper air pressure 40 seconds are required to raise the lift to full height, and 50 to 60 seconds for lowering it—regardless of load. The new 26-inch Guide Bearing insures smooth operation and a minimum air consumption when handling unevenly balanced loads. Rotary Lift was first to be listed by the Underwriters Laboratories as standard.

The above charts clearly explain the lifting capacity of the 8½-9½-10½ Inch Lifts, when connected to various sizes of Air Compressors. Some Lift installations have been unsatisfactory for raising maximum loads because the Air Compressor was entirely too small and usually overloaded. Any Automatic Air Compressor which must operate more than three-fourths of the time is overworked and will eventually break down. The figures given above are based on Air Compressors being in first class condition, as good as new, and used for operating Lifts only. Additional air operated equipment must also be calculated. The "circles" show the lifting area for each of the three sizes of Lifts, also the lifting capacity with varying air pressures from 100 to 180 lbs. A deduction of 1300 pounds for the weight of the Lift, and a small allowance for friction, packing and unbalanced loads must be made. **EXAMPLE:** The 60 Gallon Tank pumped to its full capacity of 150 lbs. pressure becomes equivalent to a 73½ gallon reservoir with 122 lbs. pressure (as indicated by the dotted line in the top diagram) as soon as an 8½ inch Lift is raised,—a 79½ gallon reservoir with 113 lbs. pressure when a 10½ inch Lift has been raised. You will, therefore, understand why small, low pressure Air Compressors are unsatisfactory for this class of service. Since most Dealers have only one Air Compressor to operate their various equipment, air lines, etc., it is therefore important that you have a Compressor of sufficient capacity to do the work, plus a reserve of at least 25%. The "Mutt and Jeff" picture on the right shows the comparison of a KRW Junior Compressor equipped with 30-Gallon Tank, operating at 150 lbs. pressure, with a capacity of 4.2 Cubic Ft. of free air per minute, which is about the average size of more than 70% of all the Air Compressors now used in Garages and Service Stations. COMPARED to the Large, KRW-QUINCY Compressor equipped with 80-Gallon, ASME Tank, operating at 200 lbs. pressure, with a capacity of more than 20 Cubic Ft. of free air per minute, which is FIVE TIMES AS LARGE. **PLENTY OF AIR at HIGH PRESSURE is the ANSWER.**



Suspended Type Installation

Supported Type Installation



(Continued from page 80)

Thermal Relay, with hand reset lever, to protect the motor against overload and under-voltage—Full Pressure Lubrication. GUARANTEED ONE YEAR against all actual defects in material and workmanship. WE CLAIM: It is the finest Air Compressor on the market, regardless of cost. A comparison will show that KRW prices are slightly more than half what competitors charge.

(Continued from page 81)

Its design is identical to the first stage of our two-cylinder models except smaller. BUILT LIKE A HIGH PRICED AUTOMOBILE ENGINE, with ALLOY STEEL, COUNTER-BALANCED CRANKSHAFT mounted on TIMKEN ROLLER BEARINGS.—MECHANICAL UNLOADER, AUTOMATIC PRESSURE SWITCH for starting and stopping.—“V” BELT DRIVE—32 GALLON (16x36) ASME TANK.— $\frac{3}{4}$ H. P. PEERLESS REPULSION-INDUCTION MOTOR, suitable for use on lighting or power line. Pumping time 0 to 150 lbs. 13 minutes. Shipping Weight, 460 Pounds.

Replacement Air Compressor For KRW “Big Boy”

No. 511

Price \$79.00

Ship. Wt. 155 lbs.
For Compressor
only

Pumping Time
0 to 150 pounds
10½ minutes



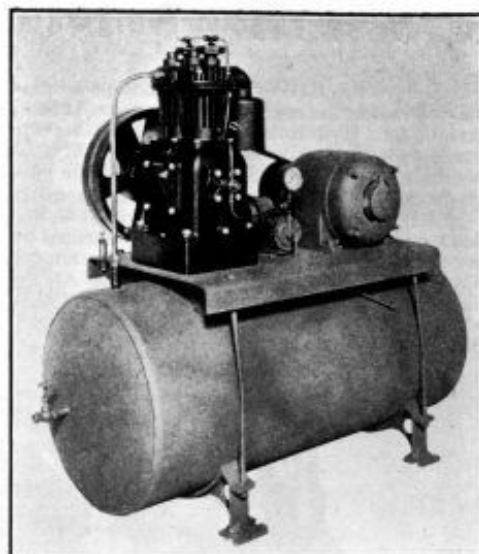
Thousands of KRW “Big Boy” Air Compressors have been sold all over the World. Many of them are overloaded and operate almost constantly with the result that a certain percentage of them are nearly worn out and need repairing or replacing. The tank, motor and accessories are usually as good as new. We will furnish this new Single Stage, two cylinder (150 lbs. working pressure) Compressor of similar design and construction to our two stage models, complete with built-in foolproof, centrifugal unloader and all other fittings shown in the picture so that your mechanics can install it within two hours and make your outfit as good as new—actually increasing its pumping capacity from 9½ to 12 cubic feet of free air per minute and pumping time, 0 to 150 lbs. in 10½ minutes. Compressor will be shipped from factory at Quincy, Ill. Other parts and accessories illustrated from our own factory, Arcade, N. Y.

This Picture
shows what you
will have when
the job is
completed.

A

2 Horse Power
2 Cylinder
12 Cubic ft. p.m.
“V” Belt Drive

Pumping Time
0 to 150 pounds
—10½ minutes.



How to Select an Air Compressor

Choose One of Sufficient Capacity to Handle
Present and Future Requirements.

To determine the proper size and type of Air Compressor you need, compute the total air consumption of all your air operated equipment, using the table below. After figuring the total, strike an average of the appliances that will be quite regularly in use at the same time. BE SURE to have plenty of reserve for peak load.

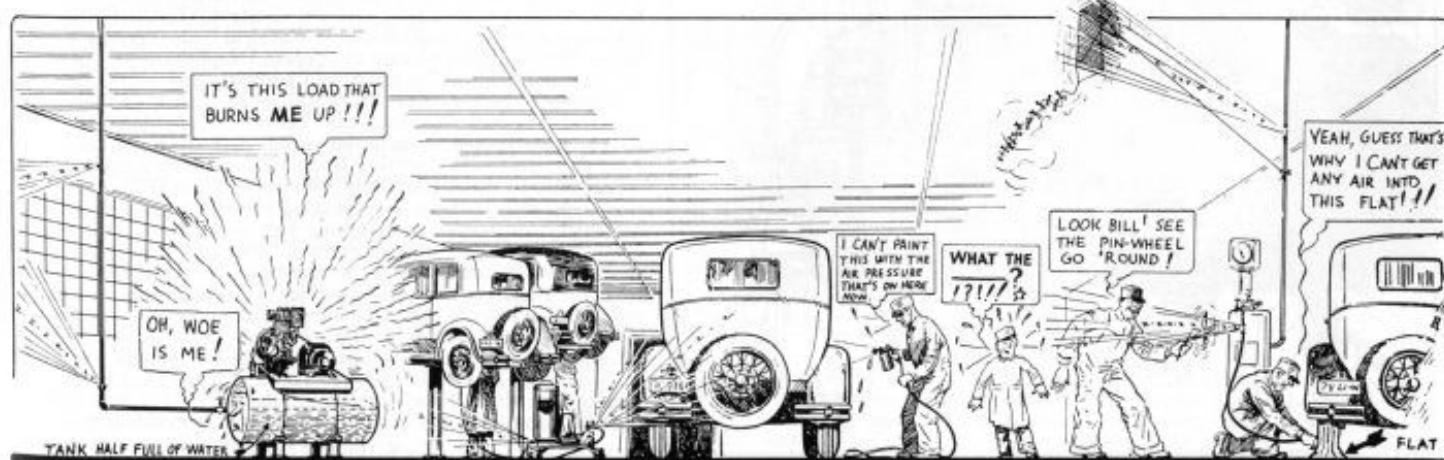
A SINGLE STAGE Compressor takes in air at atmospheric pressure and compresses it at one stroke of the piston to the final pressure. Satisfactory for pressures under 150 Lbs. A TWO STAGE Compressor accomplishes this in two easy strokes. Air is taken in the large, low pressure cylinder and compressed to an intermediate pressure of about 40 lbs., then passed through a very efficient copper intercooler to remove the excess heat and reduce the temperature before it enters the high pressure cylinder which compresses the air to the final pressure. Ideal for High Pressures.

AIR OPERATIONS

	AVERAGE CU. FT. PER MINUTE REQUIRED
Tire Inflation.....	1.5 per tire line
Spray Painting (Flat Spray).....	7 to 9
Spring Oiling.....	3
Cleaning Motors.....	6
Valve Grinding.....	2
Blow Guns.....	3
Grease Guns.....	4
Air Hammer.....	12 to 15
Air Doors.....	2
Gasoline Pump.....	1
Air Operated Lifts.....	6
Pneumatic Car Washer Nozzle.....	4 to 10

The cartoon below has been made to show the “Problems of an Air Compressor.” In many shops the leaks alone are wasting MORE air than is being used to operate all equipment.

Faulty piping, hose, valves and appliances should be inspected weekly and tanks drained of moisture occasionally.



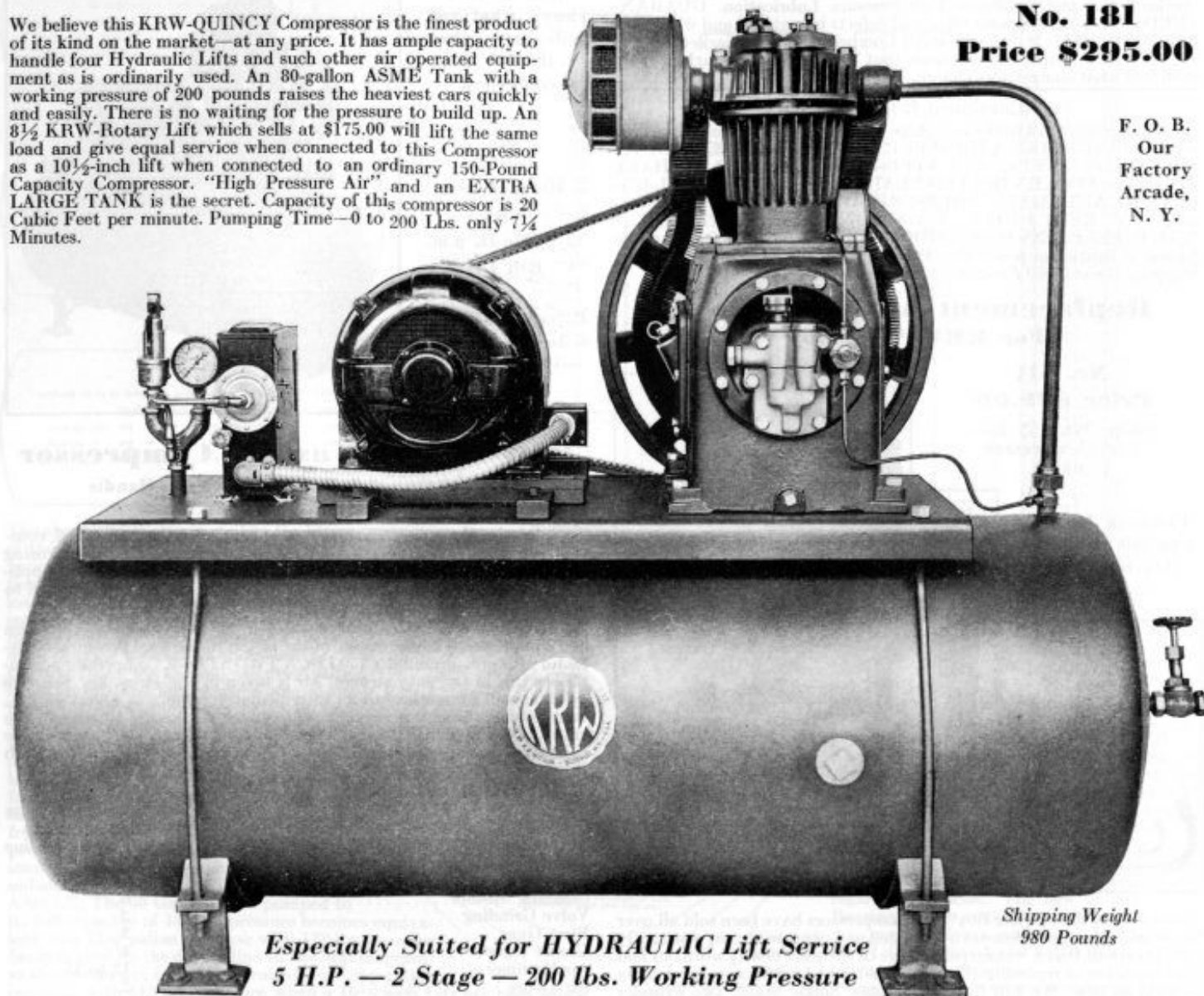
KRW - QUINCY "High Pressure" AIR COMPRESSOR

No. 181

Price \$295.00

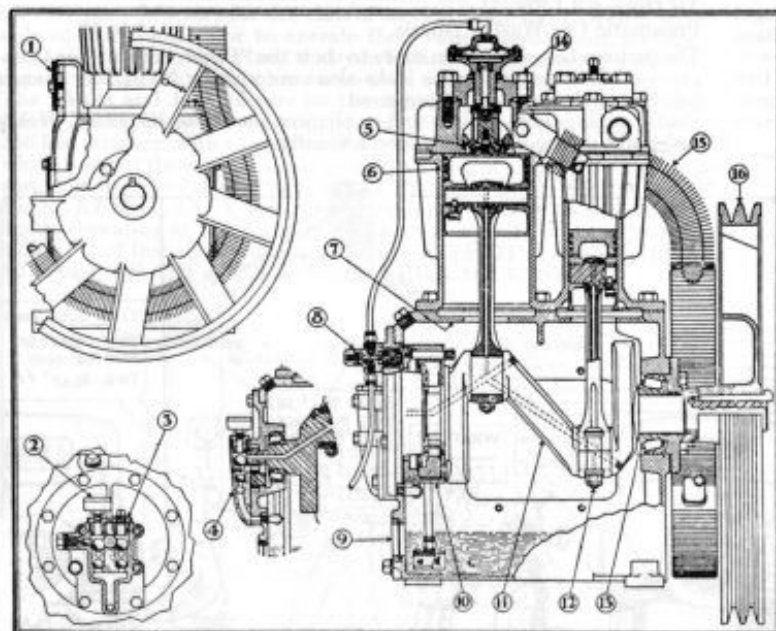
We believe this KRW-QUINCY Compressor is the finest product of its kind on the market—at any price. It has ample capacity to handle four Hydraulic Lifts and such other air operated equipment as is ordinarily used. An 80-gallon ASME Tank with a working pressure of 200 pounds raises the heaviest cars quickly and easily. There is no waiting for the pressure to build up. An 8½ KRW-Rotary Lift which sells at \$175.00 will lift the same load and give equal service when connected to this Compressor as a 10½-inch lift when connected to an ordinary 150-Pound Capacity Compressor. "High Pressure Air" and an EXTRA LARGE TANK is the secret. Capacity of this compressor is 20 Cubic Feet per minute. Pumping Time—0 to 200 Lbs. only 7¼ Minutes.

F. O. B.
Our
Factory
Arcade,
N. Y.



Especially Suited for HYDRAULIC Lift Service
5 H.P. — 2 Stage — 200 lbs. Working Pressure

Shipping Weight
980 Pounds



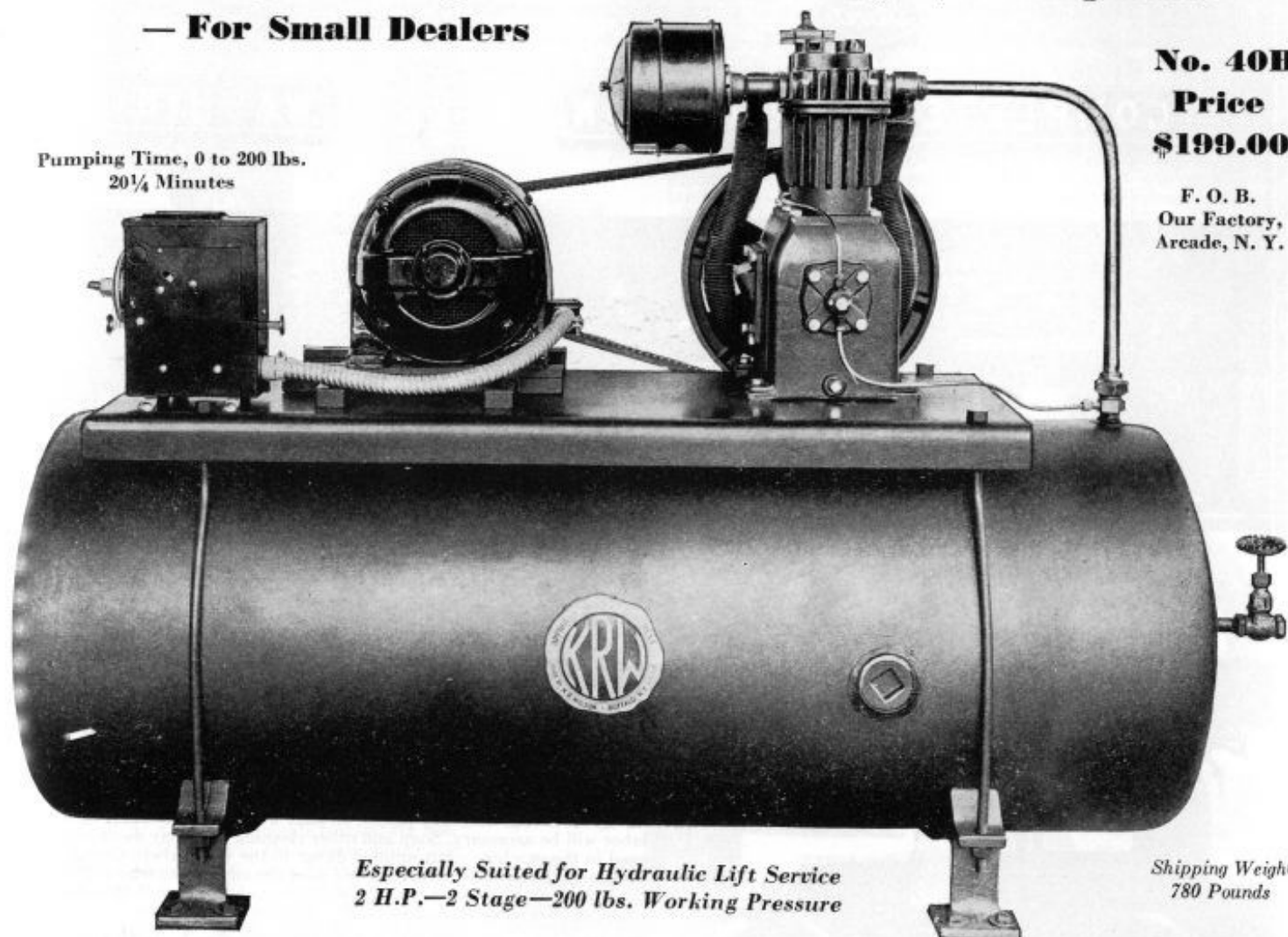
The Fine Points of This Compressor

(1) Crank-Case Breather Valve keeps out dust and grit, an exclusive feature. (2) Oil Pressure Gauge. (3) Positive pressure geared Pump, attached to end of Crank-shaft. Easily cleaned. (5) Heavy, plate type, non-warping, alloy steel valves. Easily removed without disturbing the Cylinder Head. So perfect that the "troublesome" tank check valve has been eliminated. (6) Four Piston Rings, three Compression, one Oil Control. (7) Oil Baffle Plate prevents over supply of oil. (8) Mechanical Unloader, Air Control Valve allows Tank pressure to operate Diaphragm on top of cylinder which holds valve open, and permits "free wheeling" with no load until motor comes up to full speed. (10) Fool Proof, fully enclosed, Fly-ball Governor that operates Unloader. (11) Extra heavy, drop forged, counter-balanced, drilled Crank-shaft. (12) Forged "Lynite" Connecting Rods, drilled entire length to carry oil pressure to Wrist Pins and Cylinder Walls. (13) Timken Roller Bearings, 50% oversize for the job. (14) Valve Cage Assemblies are easily accessible by removing two cap screws. (15) Copper Finned Inter-Cooler with more than 2400 square inches of radiation surface located directly in the path of a powerful air blast from the Fan Flywheel. (16) Double "V" Belt Drive,—and many more improvements and refinements that put this Compressor in a class by itself, such as—a Ball Bearing Motor—Air Filter and Silencer such as on the finest automobiles—ASME Tank and "sealed" ASME SAFETY VALVE, both of which cost much more money than standard equipment and usually sold at an extra cost—Full Automatic Control Pressure Switch combined with a

Continued on Page 79

KRW Special "High Pressure" Two Stage Air Compressor — For Small Dealers

Pumping Time, 0 to 200 lbs.
20¼ Minutes



No. 40B
Price
\$199.00

F. O. B.
Our Factory,
Arcade, N. Y.

Especially Suited for Hydraulic Lift Service
2 H.P.—2 Stage—200 lbs. Working Pressure

Shipping Weight
780 Pounds

This special, two cylinder, two stage Compressor is made especially for the small and medium sized Dealer using only one or two Hydraulic Lifts and such other Air operated equipment as ordinarily used. It operates at 200 lb. working pressure and is equipped with exactly the same 80 gallon ASME Tank, Legs and Platform as our No. 181, therefore has the same lifting capacity except the Compressor is smaller and requires 2½ times as long to refill the tank. The Compressor is almost identical in design to the large one shown on opposite page (Low pressure cylinder 3½x2½, High pressure 1½x2½). Lubrication is by splash and Ring Oil instead of pressure. It operates at 675 R.P.M., displacing 9.75 cubic feet of free air per minute. Fool proof, enclosed fly-ball Governor type Unloader (same as used on large Compressor) permits Compressor to "Free Wheel" without load until full motor speed is attained and the same reverse operation when speed is reduced. A 2 H.P. Peerless Special 60 cycle, 3 phase, 220 volt Air Compressor Motor is used. Full Automatic Pressure Switch and Thermal Relay, with push button reset, maintains pressure to cut in at 170 lbs., and out at 200 lbs.—also protects the motor against under-voltage and overloads. "V" Belt Drive, Air Filter and silencer,—in fact "Everything" that's good even to an ASME, sealed Safety Valve that costs four times as much as we need to pay for—just a Safety Valve.

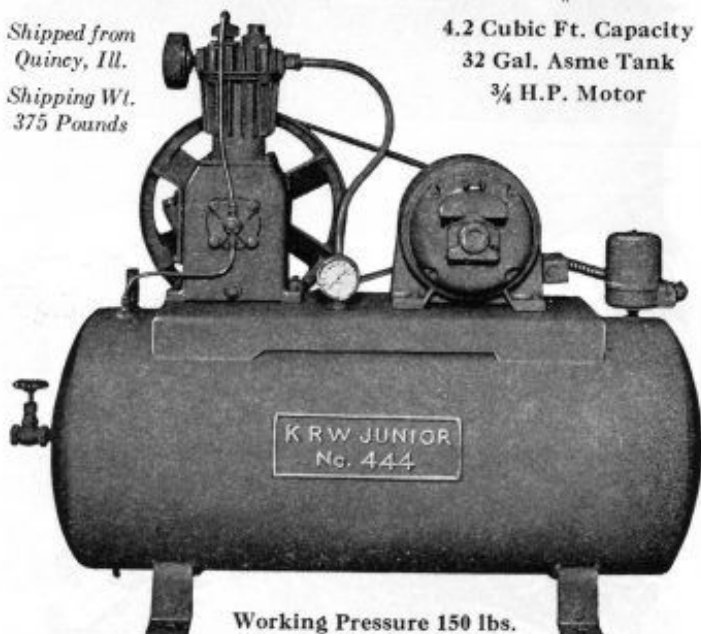
These Compressors, like all other KRW Products, are designed and built by experts. Every valuable feature to obtain maximum efficiency and long life is "built in." No expense is spared to make them the best at any price. We know present day requirements of the modern Service Station and have designed these units with high working pressure and generous sized tanks to meet them. Our low prices are made possible by volume production and our method of selling direct to Ford Dealers, by which most of the advertising and selling expense is eliminated. YOU save the difference.

No. 444 "KRW Junior" \$128.00

Shipped from
Quincy, Ill.

Shipping Wt.
375 Pounds

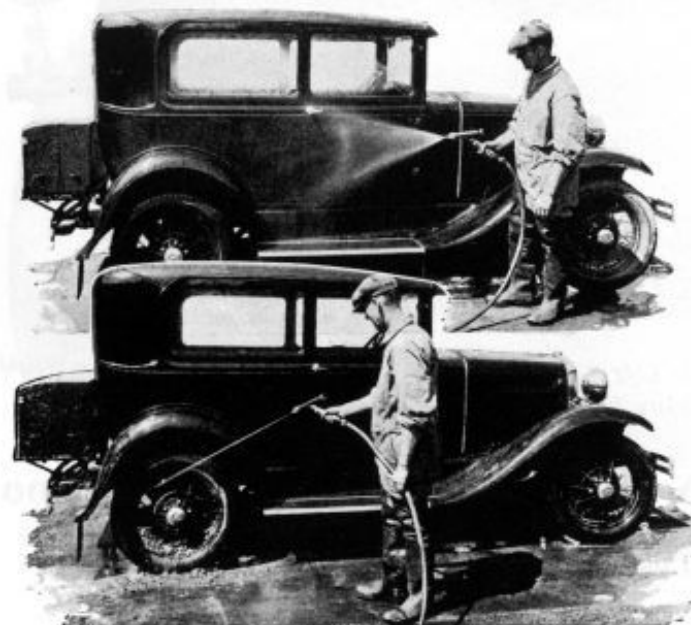
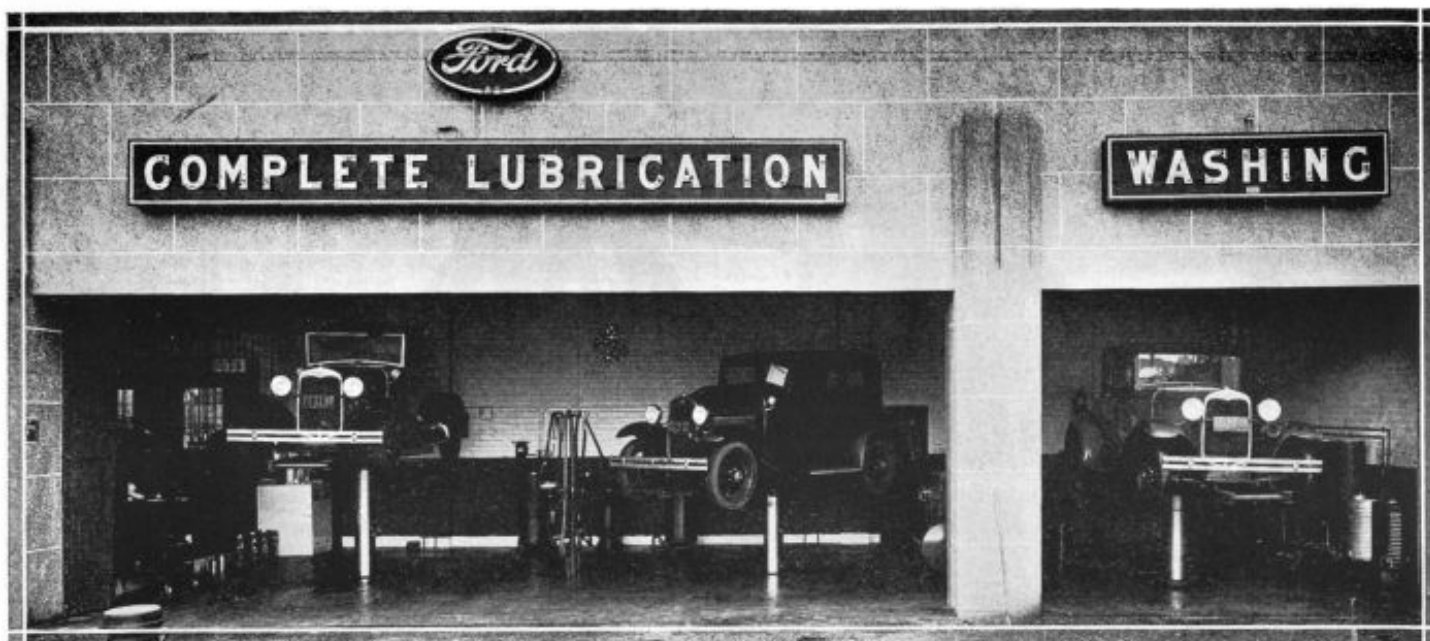
4.2 Cubic Ft. Capacity
32 Gal. Asme Tank
¾ H.P. Motor



Working Pressure 150 lbs.

This new KRW-QUINCY, one cylinder, single stage Compressor is designed especially for small Dealers, Service Stations, Fleet Owners, Tire Shops, etc. It is not large enough for Hydraulic Lift service. The Compressor (2½x2½) operates at 600 R.P.M., displacing 4.2 cubic feet of free air per minute.

Continued on Page 79



Car Washing Pays Big Profits—If

Car owners will swarm to the dealer who gives them a real 100% Job. Its not enough to mop off the Body and Fenders with water and a sponge. With the assistance of a "free wheel" type Hydraulic Lift a car can be washed clean all over underneath the Fenders and Aprons—inside the Wheels—Axles—Steering Gears and other places where dirt and grease accumulate — and the job can be completed in half the time required for the usual, half done, wash job. Car Owners are asking: Where can I get my car thoroughly cleaned???"

IMPORTANT. A car washer alone cannot wash cars clean. Its purpose is to furnish water at high pressure to quickly remove the excess dirt and grease from unhandy places, so that a minimum amount of hand labor will be necessary. Soap and other cleaning solutions should not be used in the machine—but applied direct to the work where the solvent action can take place slowly. When used through a machine these solvents are wasted because the high pressure does not permit the solution to remain long enough to dissolve the dirt, grease and grime.

The KRW "Gun" is correctly designed. Made of aluminum, it is light in weight and easy to handle. The nozzle can be instantly adjusted for either a fine spray for washing the body and top or a cutting stream for "peeling off" the mud, grease, etc., which has accumulated on the axle housings, brake drums, wheels, fenders, steering gear parts, etc., and cannot be easily removed with a sponge or ordinary water pressure. The nozzle and valves are made of bronze and stainless steel so they will not corrode.



How Could They Wash Cars This Way? They Couldn't—and Never Did.



The Only Way to Really Wash a Car Right.

K R W Improved High Pressure CAR WASHER

No. 103

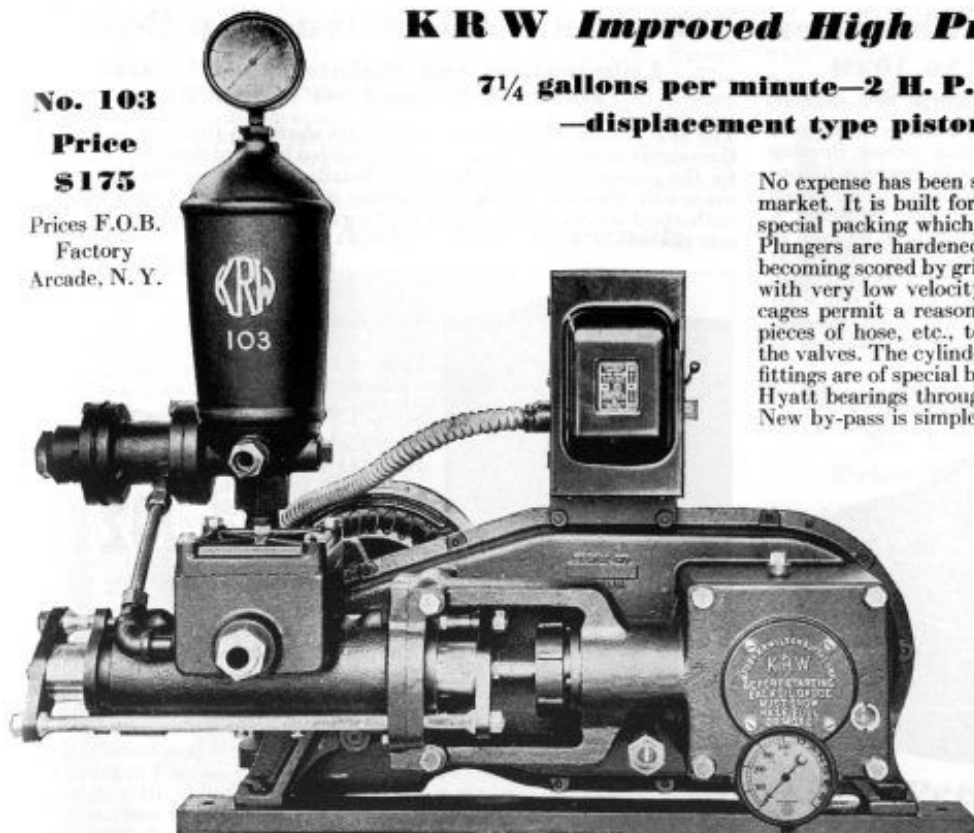
**Price
\$175**

Prices F.O.B.
Factory
Arcade, N. Y.

**7 1/4 gallons per minute—2 H. P. Motor—300 lbs. pressure
—displacement type pistons—accessible valves**

No expense has been spared to make this the finest Car Washer on the market. It is built for life-long service. The displacement pump uses a special packing which does not have to be tightened as in other types. Plungers are hardened, ground and chrome plated to prevent wear or becoming scored by gritty water. The valves allow a free passage of water with very low velocity and a minimum amount of friction. The valve cages permit a reasonable amount of foreign substance such as soap, pieces of hose, etc., to pass without interfering with the operation of the valves. The cylinders, valves, valve cages, automatic by-pass and all fittings are of special bronze composition to resist corrosion. Timken and Hyatt bearings throughout. All working parts operate in a bath of oil. New by-pass is simple in design and very accessible.

Shipping Weight 500 lbs.



Each Car Washer comes equipped with nozzle, hose, suction pipe and wrench.

Two guns can be used if desired. Extra gun with hose, \$15.00.

The 2 H. P. Motor should operate from power line. Price quoted is for 60 cycle, three phase, 110 or 220 volts. Single phase \$12.00 extra. Write for prices on other cycles and voltages.

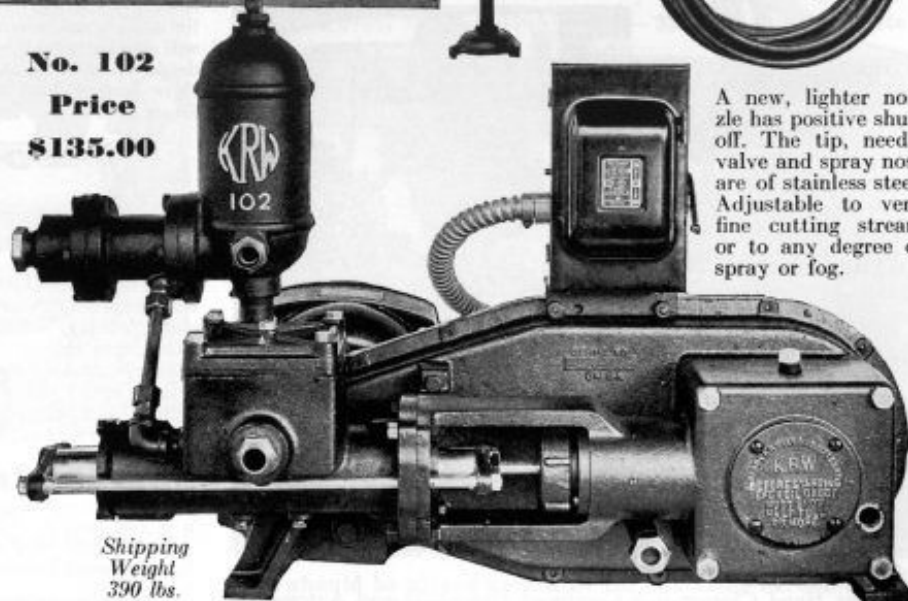
No. 102 CAR WASHER

This Car Washer is almost identical with our No. 103 except in size and capacity. The same high grade materials are used and it is likewise built for life-long service. The size of the piston is 1 and 9/16" as compared with 2" in the larger machine and it is operated by a 1 H. P. Motor. Its capacity is 4 1/2 gallons per minute at 300 lbs. pressure.

Dealers who already have the old style KRW No. 102 Washer can increase its present capacity one-third by replacing the old cylinder assembly with the new assembly pictured at the bottom of this page.

No. 102

**Price
\$135.00**

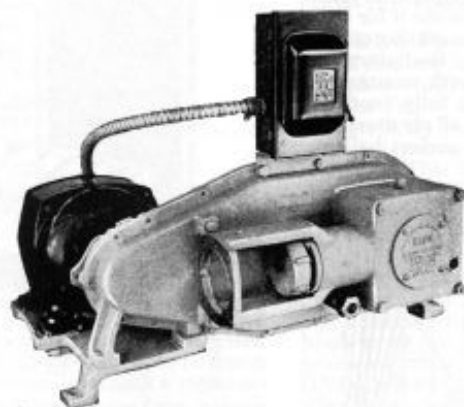


*Shipping
Weight
390 lbs.*

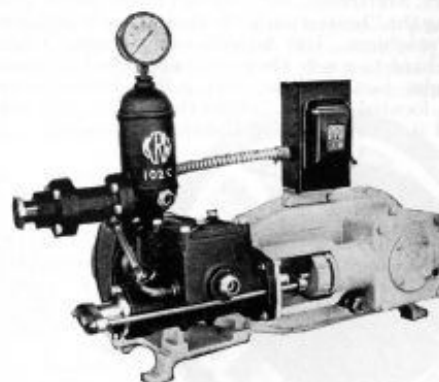
A new, lighter nozzle has positive shut-off. The tip, needle valve and spray nose are of stainless steel. Adjustable to very fine cutting stream or to any degree of spray or fog.



\$35.00 buys this complete assembly, ready to install on your present machine. *Shipping Weight 125 lbs.*



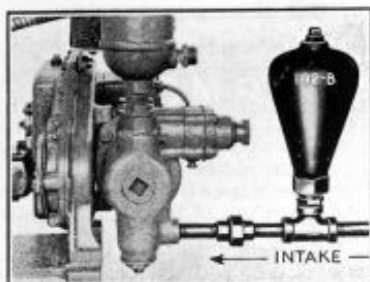
Remove the old cylinder assembly and install the new one. A 15-minute operation.



Your old machine brought up-to-date. Capacity increased one-third.

Car Washer Expansion Chamber

No. 102B
Price \$3.50



Sometimes knocking and pounding noises develop when the machine is connected direct to pipe lines of insufficient capacity. A reservoir large enough to fill the pump cylinder at every stroke must be provided. The KRW Air Dome will do it satisfactorily when connected as shown.

"APEX" Hand Cleaner

No. 491
Price \$11.50

Shipping Weight 7 Lbs.

No. 491-B
Attachments
\$2.00 Extra

VACUUM
CLEANING
IS JUST AS
IMPORTANT
AS WASHING
A CAR

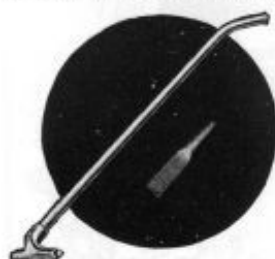


DIRTY CUSHIONS
AND UPHOLSTERY
RUIN CLEAN
CLOTHES AND HATS



Cleaning the body and chassis is only part of the job. The cushions, upholstery and top liner are equally important. They serve as a stopping place for road dirt and dust which blows in the windows. If this is not frequently removed it becomes very dirty and will cause many suits, dresses and hats to be sent to the cleaner. If you really clean cars—Clean, then you will get more than your share of this kind of highly profitable service work.

The Apex Hand Cleaner is a Combined Household and Automobile Cleaner. Its design makes it most convenient for cleaning Upholstery, Car interiors, Mattresses, etc.,—in fact many people prefer to use it for daily cleaning the "beaten path" on their rugs, in preference to getting out the larger machines. The Adapters for cleaning Curtains, Radiators and other hard-to-reach places are additional features worth mentioning. It weighs just a little over 5 lbs. Has a powerful, fully enclosed Motor, located directly behind the suction pipe so that all air must pass around it. The Handle of Bakelite is designed to give perfect balance.



Radiator Tool and Extension
Tube with Swivel Nozzle

Continued
on
next page



See the Ford Instruction Book

Lubrication and Maintenance Chart
Items—"N" and "O" Page 21

The new greaseless "drytype" lubricants shown on this page have been thoroughly tested and are now recommended by Ford Service Engineers for the purpose intended. A special distributing arrangement has been made with the manufacturers, whereby we can supply all Ford dealers, authorized service stations and fleet owners, etc., at the lowest wholesale prices.

RIZ

3 OZ. CAN

Your Cost, \$3.00 Doz.
Sell (.50) \$6.00 Doz.
Packed 12 Cans, or 2
Easels, Per Carton

PINT CANS

Your Cost, \$7.20 Doz.
Sell (\$1) \$12. Doz.
Packed 12 Per Carton
SPECIAL PRICES
One Gallon, 5 Gallon
15-30-60 Gal Drums

SHIPMENTS

Will be made either
direct from factory at
Waupun, Wis., or our
own plant at Arcade,
N. Y. at our option.



RIZ is a new discovery, a dry type lubricant. It is especially prepared for door hinges and locks, body squeaks, door shutters. It penetrates, lubricates and prevents rust. Unlike oil, it does not drip and soil upholstery, clothing, hands, etc., but penetrates to the hinge pin and dries immediately as you apply it, forming a clean transparent waxy surface. RIZ is made by an old reliable concern and is guaranteed to do what we claim for it. Use pint cans in your shop and 3 oz. cans for retail sales. A pint can will usually service about 75 cars. TO DEMONSTRATE RIZ, put a few drops on a clean metal surface or a piece of glass, blow it lightly and show how it dries immediately to a clean waxy finish, then rub your finger over it and feel the lubricating properties of this clean lubricant.



DOOR-EASE. (Lubricant impregnated wax). The new, clean, dry, weatherproof lubricant is easy to apply. It will not run, smear, soil or stain clothing. Made especially for lubricating door lock tongues, dove-tails, hood latches, floor boards, window lifts, etc. It eliminates and prevents contact squeaks, binding rattles and wear. Every one likes to drive a quiet car. DOOR-EASE and RIZ used at the points recommended will help you get these results—and greatly increase the volume of business and profits of your shop.

Special Introductory Offer \$1.44

Six Shop Size Sticks of Door-Ease

1 Wall Display Sign,

1 Steel Wall Bracket

Retail Value "Door-Ease" 50c Per Stick \$3.00



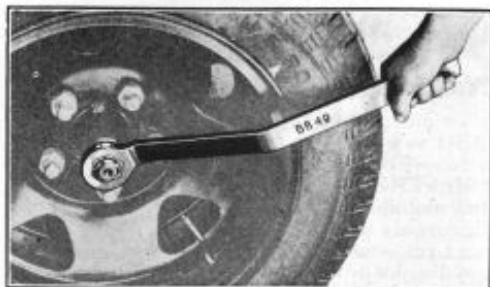
After the first introductory order, the regular wholesale price of \$3.00 per dozen applies. DOOR-EASE can also be supplied in small sticks for customer's use, retailing for 15c each, packed 24 in attractive counter display package. Costs you \$2.16 and sells for \$3.60—an interesting profit. Prepare to render this important service, as recommended by Ford Service Engineers. Read about it in the new V-8 Instruction Book. Place your orders now.

The Toggle Switch in the handle is thumb operated. The 8-inch polished Aluminum Nozzle is fitted with a flat, comb-like Brush to pick up lint, threads, etc. The Nozzle can be quickly removed to attach the Extension Tube and Swivel Nozzle or Radiator Cleaning Attachment. The Bag is made of heavy twill cloth. It is the only hand operated cleaner made with a generous bag opening for easy emptying. Mr. Dealer, you need a couple of them for your Garage and YOUR HOME! You will find Apex Service Stations in every important city in the U. S. A. Write for catalog on large DeLuxe Cleaners, Electric Washers, Electric Ironers and Electric Refrigerators. We quote Wholesale Prices.

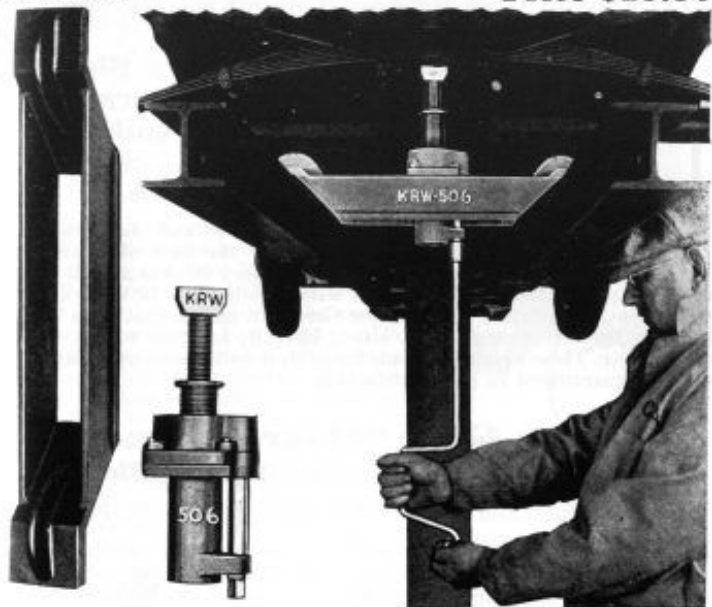
"BB" Truck Axle Nut Wrench

No. BB-49
\$2.50

The KRW Truck Axle Nut Wrench is just what you have been looking for. A big husky wrench for a tough job. The socket is drop forged and broached to size then electric welded to a heavy oval-edge bar. Try every wrench you have and convince yourself you need it.



KRW "Spring Lubrication" Jack No. 510 Price \$13.50



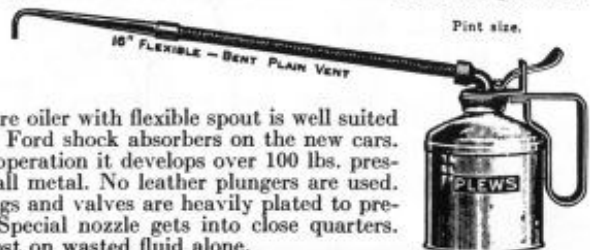
Shipping weight 30 pounds

The KRW "Spring Lubrication" Jack has been designed for raising the weight of the car off the springs, while the car is on the Lift,—to separate the spring leaves and permit 100% Lubrication. The Cross Bar is a strong and well braced Semi-Steel Casting. The Jack is of simple design. The Screw is raised by means of a pair of spur gears with a ratio of about 1 to 3, insuring easy operation. The Large Gear has a Ball Thrust Bearing to reduce friction. An Ordinary Speed wrench is used. Dealers everywhere have been asking for such a device. Well here it is. Give width inside of Rails when ordering.

"HOODYE" TOOLS

Plews "Hoodye" Filler

No. V125 Price \$2.35

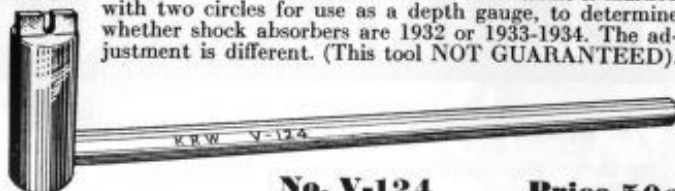


This pressure oiler with flexible spout is well suited for refilling Ford shock absorbers on the new cars. In normal operation it develops over 100 lbs. pressure. It is all metal. No leather plungers are used. Valve springs and valves are heavily plated to prevent rust. Special nozzle gets into close quarters. Saves its cost on wasted fluid alone.

You need two of these guns—one for the present automatic thermostat type and the other for the Model A type, as two entirely different kinds of fluid are used.

KRW Adjusting Wrench

This new K R W "Hoodye" Shock Absorber Adjusting Wrench is especially designed for the new type instruments. It is well made and will stand up. Although not shown in cut, the end of the handle is marked with two circles for use as a depth gauge, to determine whether shock absorbers are 1932 or 1933-1934. The adjustment is different. (This tool NOT GUARANTEED).



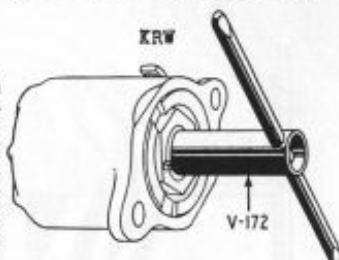
No. V-124 Price 50c

"Use Genuine 'Ford' Shock Absorber Fluid"

Hoodye Packing Nut Wrench

No. V-172
Price 75 Cents

This KRW Socket-Spanner Wrench is designed especially for use on 1934-1935-1936 cars. It is accurately made, and case hardened. It will usually be found when a shock absorber is leaking at the packing nut that the leak can be eliminated by tightening the nut with this wrench.



A new Spanner Wrench No. V-180 for 1936 Front Hoodye Only is available at 80c each.

KRW-Peerless "Ventilating" Fans No. 509 (60 Cycle, 110 Volt) Price \$27.50

18 inch — ¼ H. P. — 1150 RPM. — 3250 Cu. ft per minute



Fans should be placed near floor for removing carbon-monoxide gas, fan shown in window to remove smoke and heat from the room.

This KRW-Peerless "Super" Ventilating Fan is large and powerful. It will displace 3250 cubic feet of air per minute. The motor is ¼ H. P. split phase, fully enclosed. Operates at 1150 R.P.M., for greatest efficiency. The Fan is 18 inches in diameter and of multi-blade construction. It is perfectly balanced, statically and dynamically, to prevent vibration. This Fan is just what you need for poorly ventilated garages, show rooms, etc. They pay for themselves in the extra work your mechanics will turn out when they are able to breathe Fresh Air instead of those poisonous, carbon-monoxide gases. Made in 60 cycle only. Write for prices on other sizes, also on UNDERWRITERS APPROVED Fans equipped with non-ferrous Blades, designed especially for use in Paint Spray Booths.



REFINISHING

KRW "Synthetic" Enamels

For Garage and Service Station Use



NET PRICE LIST — F. O. B. Factory, Buffalo, N. Y.

		5 Gal. Cans	1 Gal.	Quart
		Per Gal.		
No. 1	KRW Ivory—Sidewall & Ceiling	\$2.20	\$2.25	\$.65
No. 2	KRW Aluminum—Sidewall & Ceiling	2.90	2.95	.85
No. 3	KRW White—Sidewall, Ceiling & Panel	2.40	2.45	.70
No. 4	KRW Red—Dado Stripe & Equip't	2.80	2.85	.80
No. 5	KRW Grey—Dado, Door and Equip't	2.15	2.20	.65
No. 6	KRW Tan—Dado	2.30	2.35	.70
No. 7	KRW Orange—Lubrication Rack	2.55	2.60	.75
No. 8	KRW Black—Lub. Rack Trim & Push Plate	2.50	2.55	.75
No. 9	KRW Light Grey Floor Enamel	2.15	2.20	.65
No. 10	KRW Dust Color Floor Enamel	2.15	2.20	.65
No. 11	KRW Cream—Entrance Door Panel	2.30	2.35	.70
No. 12	KRW Yellow—Entrance Door Panel	2.55	2.60	.75
No. 13	KRW—White Primer Sealer	2.15	2.20	.65
No. 14	KRW—Ivory Primer Sealer	2.15	2.20	.65

SEE! March 1935 Ford Service Bulletin for Suggested Color Combinations

KRW (Bakelite type base) SYNTHETIC ENAMELS represent the latest scientific development in synthetic automobile finishes,—therefore, a product that will stand the abuse given the average automobile is entirely suitable for finishing Salesrooms and Service Stations. This enamel, whether sprayed or brushed, flows out smooth as glass, and dries quickly with a high gloss finish. It does not collect dust or soil easily, like common oil paints. IT IS WATER, ACID and ALKALI PROOF—therefore will stand repeated washing and cleaning to restore its original appearance, the same as an automobile. Finger Marks and other soiled spots can be wiped off with a wet cloth like a porcelain sink.

THIS ENAMEL IS MORE ECONOMICAL TO USE and has so many other advantages over Oil Paints that there is no Comparison. ONE GALLON COVERS 650 SQUARE FEET of average surface. ONE COAT over old work is usually sufficient except with White and Ivory. NEW WORK requires a foundation coat of Primer-Sealer. KRW ALUMINUM ENAMEL contains the finest pigment made. It is unusually Brilliant—almost as silvery as a sheet of Aluminum itself. COVERS 800 to 1000 square feet of average surface.

MARCH 1935 FORD SERVICE BULLETIN suggests three different color schemes which have proven very practical and satisfactory. YOUR OWN Sales and Service Departments can be made to look just as clean and attractive as those shown in the pictures, with very little effort—at a surprisingly low cost—by using KRW-Synthetic Enamels. They are made from the highest quality of materials obtainable and sold at un-

usually low prices because our method of merchandising, through the cooperation of the entire Ford Organization, eliminates the unnecessary overhead expense of our competitors—such as Advertising, Maintenance of Branch Offices, Warehouses, Selling organizations, etc. If interested, write for Color Card. NOTE: KRW Equipment will be painted No. 4 Red or No. 5 Grey to match these color schemes at no extra cost, if so ordered.

WE STILL CARRY THESE KRW "SPECIALS"

Made for us by the Impervious Varnish Company for Dealers who have been using these colors

"SilverKote"

Aluminum Paint

For Side Walls and Ceilings

No. 119 Price \$2.75 Gal.

In 5 Gallon Lots Only

F. O. B. Factory, Pittsburgh



"SILVERKOTE" is a real metallic coating of tiny aluminum flakes mixed with a binder that thoroughly seals the surface—and is impervious to moisture, oil, grease, etc., therefore does not discolor or fade. It is particularly adapted to ceilings and side walls because of its wonderful light reflecting and diffusing qualities. Its silvery color is rich and moderne. Only one coat is necessary for complete coverage—400 square feet to the gallon. Can be easily applied with spray gun or brush. Dries hard in a few hours. We have received thousands of repeat orders from Ford Dealers all over the world. "SILVERKOTE" for Economy, Protection and a nice job.

No. 118—Machinery Blue

No. 120—Tractor Gray

Price \$1.75 per gallon

In Cases of Six One-Gallon Cans

F. O. B. Factory at Pittsburgh, Pa.



Keep your machinery, tools and benches well painted, to help put over the idea of cleanliness in your shop. The Machinery Blue is a high grade oil-proof paint made to match that with which all K R W tools and equipment are painted. The Tractor Gray will match that with which Fordson tractors were painted. Use it liberally in stock rooms, walls, ceilings, etc. These paints are made for us by a well known manufacturer and are guaranteed to give satisfaction.

Red or Gray "Floor Lacquer"

No. 178 Price \$3.25 per gallon

In 5 Gallon Lots Only—F. O. B. Factory, Pittsburgh, Pa.

KRW Gray and Red Floor Lacquer have proven very satisfactory as evidenced by thousands of repeat orders received—A Floor coating suitable for Show rooms, Garages, under grease racks, etc. Will not absorb oil, Grease or Gasoline. Can be brushed or sprayed.

PAINT FOR YOUR HOME

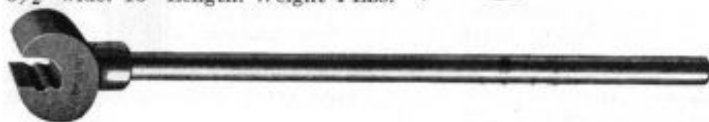
There is no need to pay High Prices for Paint. We can supply YOU the Highest Quality of Paint obtainable at just a little above Factory prices. Our Paint Factory in Buffalo who produce KRW "synthetic" Enamels have had more than 40 years experience making high grade paints. Therefore we are confident that we can please you with quality and price. Send us your inquiries, stating number of gallons you can use and colors wanted, for Quotations.

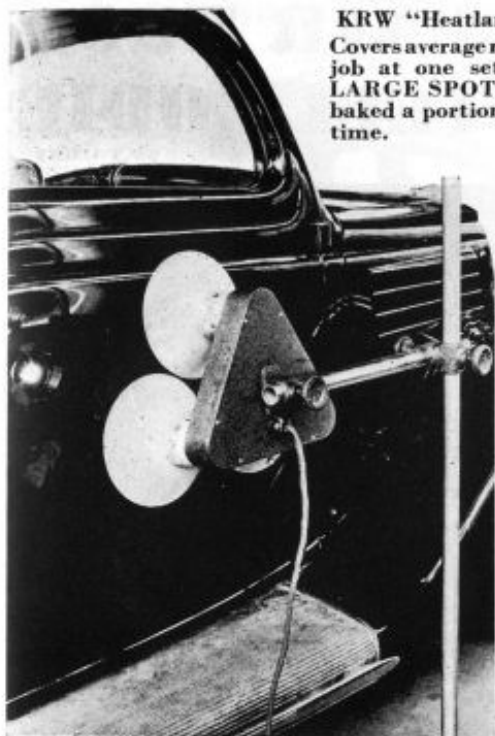
"Fairmount" Hinge Bending Tool

No. 487

Price \$2.00

This husky Hinge Bending Tool is designed especially for Bending hinges to make doors fit and close properly. The Head is drop forging 2½" thick x 3½" wide. 18" Length. Weight 4 Lbs.

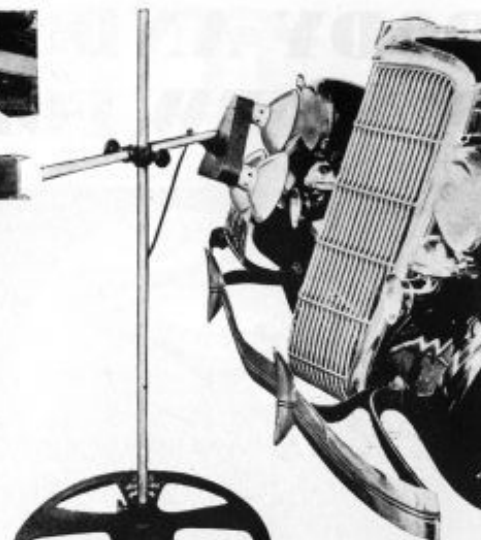




KRW "Heatlamp"
Covers average repair
job at one setting.
LARGE SPOTS are
baked a portion at a
time.



For **HEATING**
Differentials and
Crank-cases
before Draining



THAWING
Frozen
Radiators

KRW "Heatlamp"
No. 476 Price \$18.75 ★
F. O. B. Factory, Arcade, N. Y.

We are exclusive manufacturers of the KRW Heatlamp made under "patents" recently granted Ford Motor Company on a New and Original Process for Baking Synthetic Enamels by the use of Concentrated Infra Red Rays, which requires only 5 minutes at 180 degrees to thoroughly and uniformly dry each layer—without blistering, as compared with 2 or 3 hours at 300 degrees by any other method. Specially designed Reflectors concentrate these heat rays as shown by pictures. This New Heatlamp enables ordinary painters or handy men to refinish damaged spots on bodies,

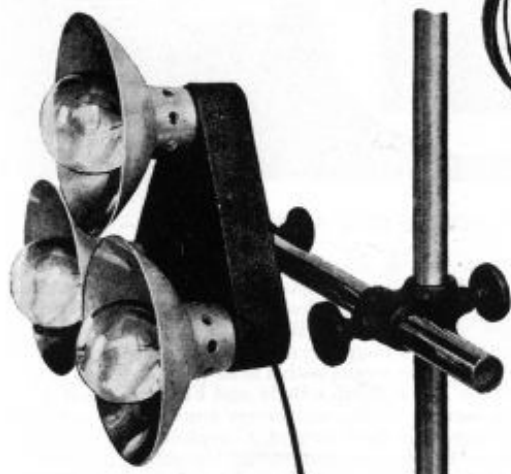
Made Under
FORD MOTOR COMPANY
Patent
No. 1998615

Made for
110 Volt Only
AC or DC

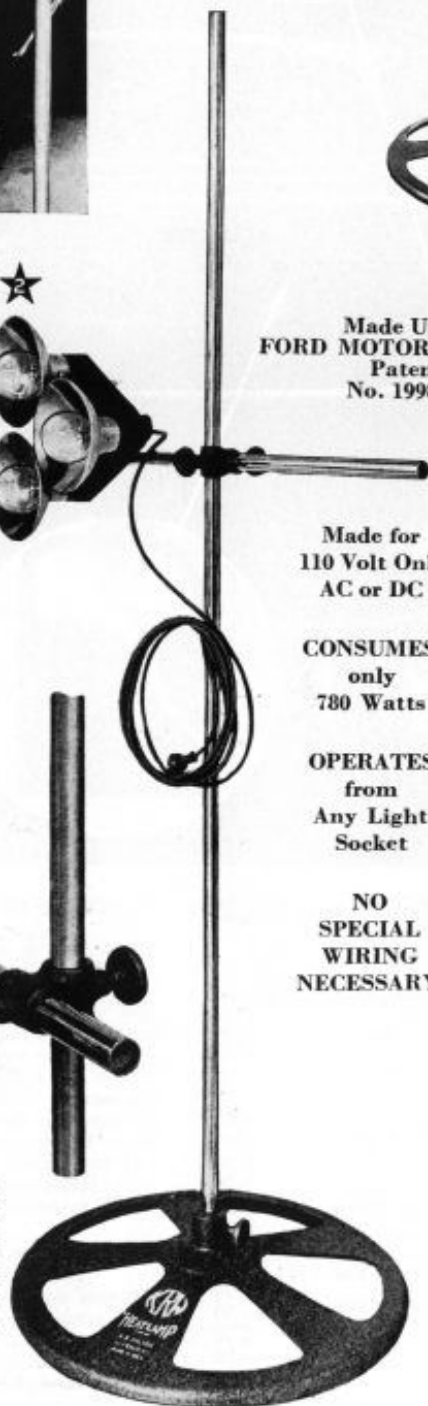
CONSUMES
only
780 Watts

OPERATES
from
Any Light
Socket

NO
SPECIAL
WIRING
NECESSARY



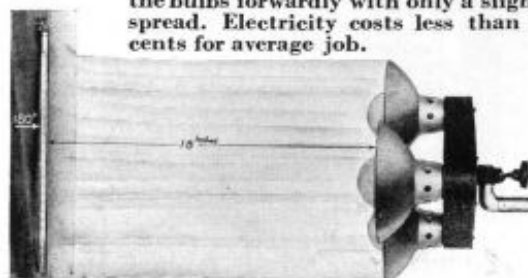
doors, fenders, etc. to exactly match the original, durable, finish of the car. It is also valuable for heating Crankcases, Differentials and thawing frozen Radiators as there is no fire hazard. Every Dealer needs this equipment to render quick, satisfactory service. It is now included on No. 2 Essential List.



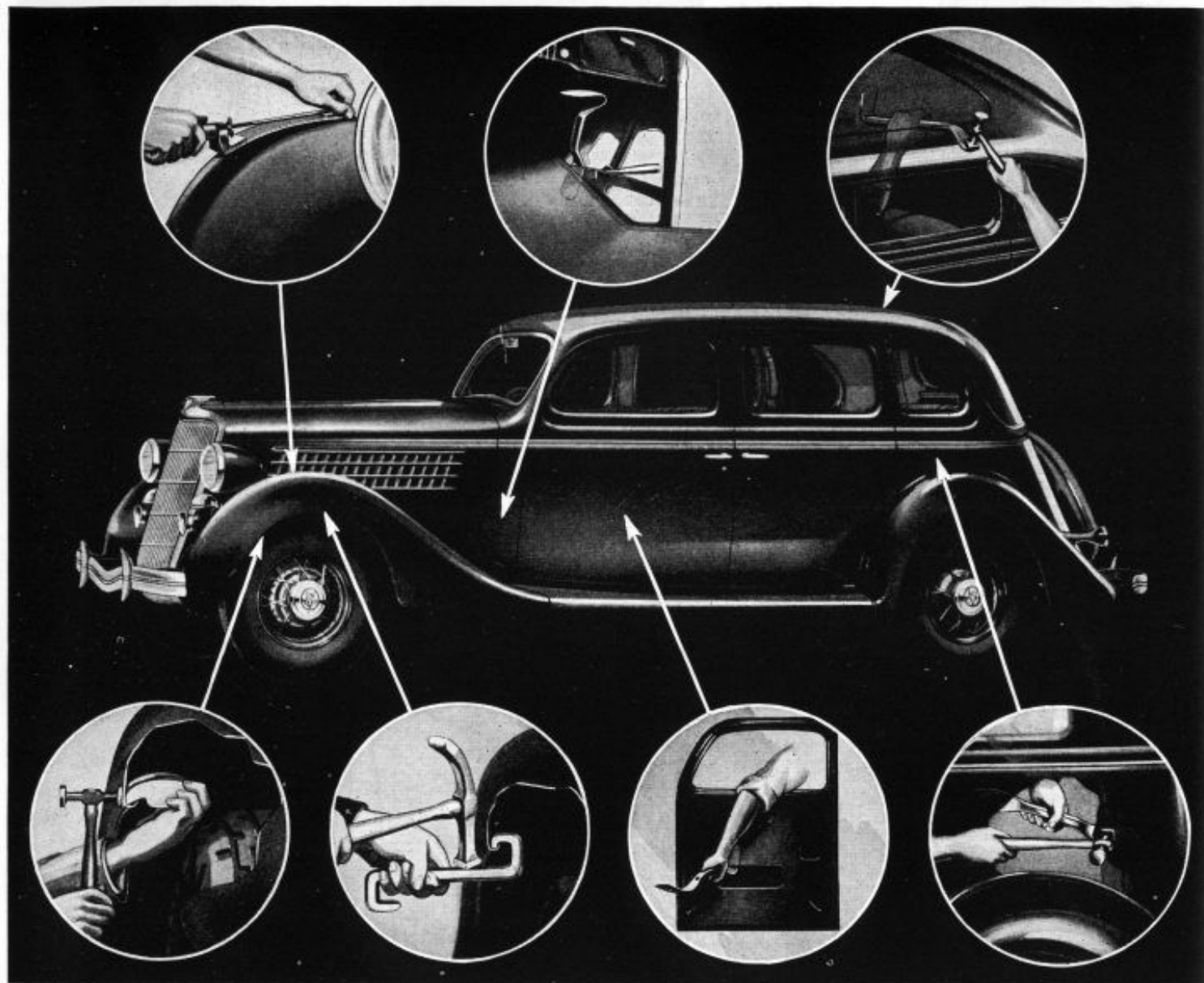
KRW "Heat Lamp"
will reach any part
of the car



SPECIALLY DESIGNED REFLECTORS focus the "rays" emitted by the bulbs forwardly with only a slight spread. Electricity costs less than 2 cents for average job.



BODY AND FENDER REPAIR TOOLS FOR NEW FORD V-8 ALL-STEEL BODIES



Standard Set No. 305 (18 Tools) \$34.12
IF ENTIRE LOT IS ORDERED AT ONE TIME

INDIVIDUAL TOOLS

A-6	Double End Lower Back Panel and Wheelhouse Spoon.....	\$ 3.35
B-6	Fender and Cowl Bracket Spoon.....	2.30
E-6	Body Post, Hinge and Center Panel Spoon.....	1.25
C.D-1	Cowl and Wheelhouse Dolly.....	2.50
D-1	Special Door and Side Panel Spoon.....	3.35
W.M-5	Lignum Vitae Bumping Mallet.....	.65
B-3	Double End All-Metal Door and Side Apron Spoon.....	3.35
F-2	Double End Heavy Duty Driving Spoon.....	2.30
F-3	Fender Beading Tool.....	2.30
G.D-1	Low Crown Bumping Dolly Block.....	2.50
G.D-2	High Crown Bumping Dolly Block.....	2.50
G.D-3	New Fender Dolly Block.....	2.50
B.H-4	Bumping Hammer, 4 inch.....	1.25
B.H-6	Bumping Hammer, 6 inch.....	1.70
R.H-10	Special Designed Roughing Out Hammer.....	2.50
F.H-14	Flexible and Adjustable File Holder.....	2.30
M.H-1	Magnetic Trim Hammer.....	2.10
T.P-1	Trim Pick Regulator.....	.50
Shipped Direct from Factory, Roxbury, Mass.		\$39.20

PROFITS — PROFITS — PROFITS!

Every Automobile Collision is a Bumping Job and a source of profit for someone. It belongs to the Ford Dealer. With this set of 18 specially designed tools that fit every part of the New Stream Lined Body and Fenders and illustrated on our Special 4 Page Circular (sent on request) there is no reason why any Mechanic, with a little practice, should not be able to handle any kind of a Body and Fender Repair job. You need this service for your customers' convenience as well as re-conditioning your used cars. A Complete, Practical Manual that pictures and explains in detail the simplest, quickest and best way to handle every kind of a job, will be furnished Gratis with every complete set of tools. Only seven of these tools are illustrated above.

Air Operated Hammer

We can supply an "Air Operated Hammer" complete with seven dies, which saves hours of hand hammering and does a much smoother job, eliminates ninety per cent of hand filing or grinding, at \$42.50 complete. Fully guaranteed. If interested, write for special circular.

KRW Sanding and Polishing Machine

No. 140C

Price \$72.00

ATTACHMENTS EXTRA

The KRW all-purpose, 3 speed, portable, Sanding and Polishing Machine was developed to reduce labor costs and make more money on repainting, fender and body work. The new "V" Belt drive with eccentric belt tightener, balanced Aluminum Pulleys makes it better than ever. The Head swivels in any direction on Ball Bearings. Can also be locked in any convenient position. Flexible Shaft is 6 foot long with $\frac{1}{16}$ " reverse laminated core. Made by Stowe of Binghamton. It is Rubber Covered to prevent scratching and re-inforced with flat spiral springs at the ends to prevent kinking. Counter-shaft and Handle are each equipped with two annular Ball Bearings.



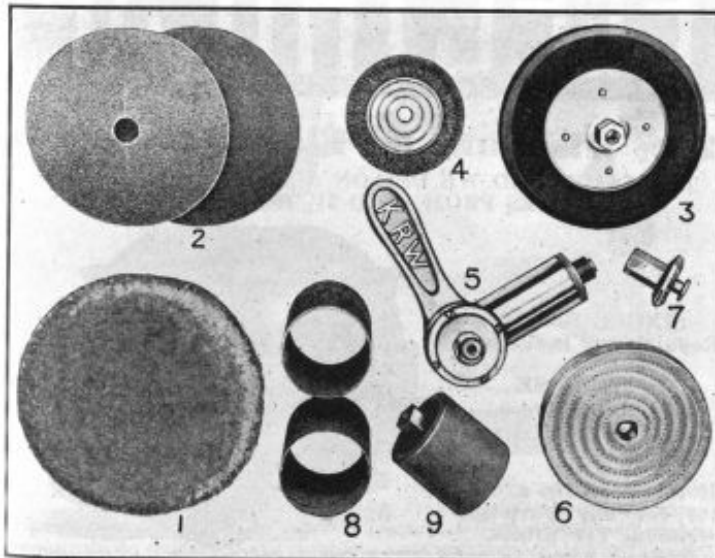
MOTOR
BALDOR, $\frac{1}{2}$ H. P.

Full Ball Bearing
60 Cycle, 110 or
220 Volts. Write
for Prices on
Other Types.

"KRW FEATURES"
3 Speeds
"V" Belt Drive
Full Ball Bearing
Correctly Priced

Attachments

No. 1.	7 Inch Wool Buff.....	\$ 2.00
No. 2.	7 Inch Sanding Disc.....	.25
No. 3.	Polisher and Sanding Pad.....	4.00
No. 4.	Four Inch Wire Brush.....	1.25
No. 5.	1 to 2 Angle Head.....	18.00
No. 6.	Six Inch Cloth Buff.....	1.00
No. 7.	Emery Wheel Arbor only.....	1.50
No. 8.	Sanding Drum Band.....	.30
No. 9.	3x3 Rubber Sanding Drum.....	2.25



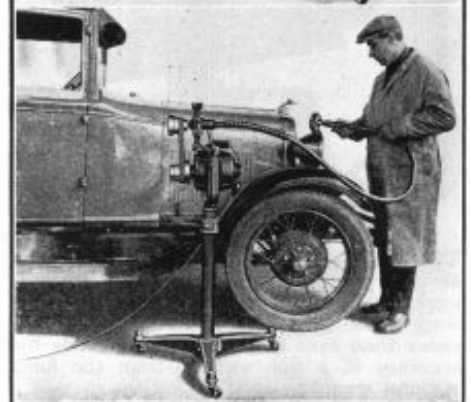
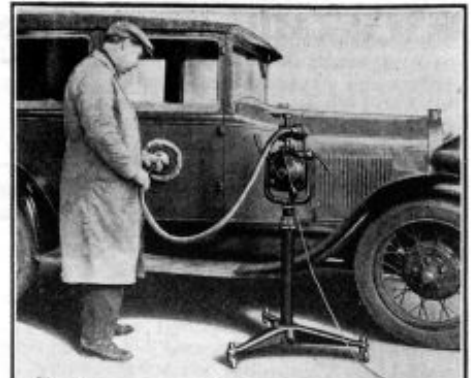
A lacquered job is only half finished unless it is rubbed, then buffed to a high lustre. This picture shows the straight line drive with 7-inch sheep's wool buff. Used cars can be completely cleaned and waxed to look like new, in less than two hours. Waxing pays big profits. Go after it; cut the price—get the volume and make BIG MONEY.

The Angle Head is desirable for the most convenient positions — for polishing and buffing operations on the body and fenders — and when used with a flexible felt pad for rubbing down lacquer to eliminate "orange peel". A slow speed of about 900 R.P.M. is recommended. Then the final touch at full motor speed.

The 3 x 3 inch Rubber Sanding Drum is used for grinding and polishing wide areas, such as "dinged spots", etc. Inexpensive abrasive bands are used.

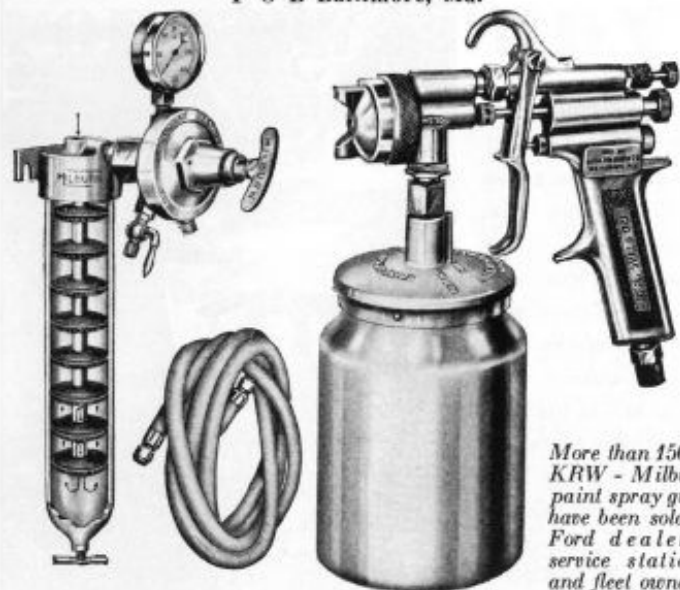
Rusty spots in unhandy places are quickly cleaned for repainting with a 4-inch rotary scratch brush.

Cloth buffs are used to polish all nickled and plated parts — much better, ten times faster.



K R W - Milburn Paint Spray Outfit No. 94 Price \$37.50

F O B Baltimore, Md.

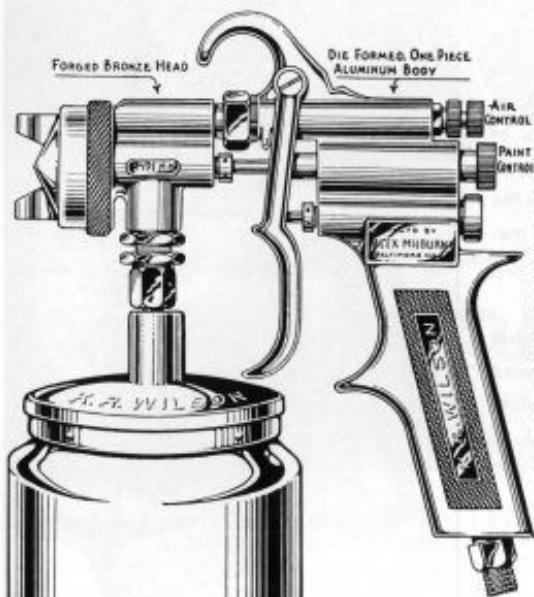


More than 15000
K R W - Milburn
paint spray guns
have been sold to
Ford dealers,
service stations
and fleet owners.

K R W Price includes everything you see in the picture above, such as: Spray Gun complete with one quart Aluminum Can and Cover, an efficient Air Purifier, Large forged bronze Air Regulator and Gauge, 25 ft. of hose with Connections.

PRICES FOR SEPARATE ITEMS

Spray Gun.....	\$19.00
Quart Can and Cover.....	4.00
Air Purifier and Strainer.....	12.50
Air Regulator and Gauge.....	10.00
Air Hose and Connections.....	3.50



The Body is a die pressed Aluminum Forging and the Head is a Bronze Forging coupled together, but readily removable for repair or replacement if necessary. The gun is light, well balanced and effective. It embraces the most advanced refinements in Spray Gun Construction. We say: No finer outfit is built at any price.

This new Type "MM" K R W - Milburn Paint Spray Gun is the newest and most versatile on the market. Handles all kinds of Paints, Lacquers and especially Synthetic Enamels. AIR CONTROL KNOB regulates the pressure of air and governs the width of the spray. PAINT CON-

TROL KNOB regulates the quantity of paint and in conjunction with air control, adjusts spray any width desired. Does the finest touch-up work too,—really two guns in one. Does big work, Flat work, Round work and Small work. It gives a wider and more perfectly atomized spray than ever before obtained. Made by skilled mechanics to the accuracy of a fine watch,—from the finest materials obtainable,—without regard to cost.

K R W Electric Polisher

The K R W Electric Polisher is equal or superior to any other make of similar design —yet we sell it for considerably less than half the usual price. Universal motor (same as electric drill) 110 volt. Full ball bearing equipped. Carries 7 inch Sheepswool pad. Can be used for all polishing and buffing operations. It is compact and convenient to handle. Polish the new cars and clean up the old ones for greater profits.



No. 165
Price
\$28.00

A 1/4-inch chuck can be supplied at additional cost of \$7.50 to convert this into a good quarter-inch electric drill.

Shipping Weight 4 Pounds

"GRA-C" Dolly-9 Working Surfaces No. 443 Price \$2.00



This new "Dolly Block" is designed especially for removing dents in skirted fenders, without removing brackets; also very useful on body work, doors, cowls, radiator shells, tire wells, behind body posts and channel iron brackets. Made of special analysis steel. Will not chip, break or bend. Accurately finished and highly polished all over. Size 4 1/4 x 3 1/4 x 1 thick. Shipping weight 2 pounds. Usually saves its

cost on a couple of jobs. Every dealer needs one.

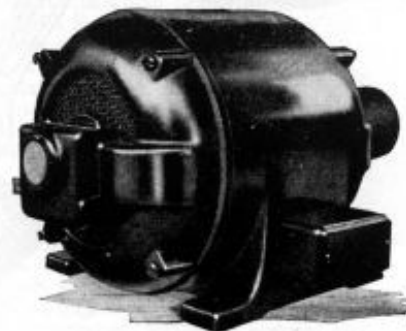
ELECTRICAL

20% Discount on Electric Motors

THE SAME KIND WE USE ON ALL K R W EQUIPMENT
ALL SIZES FROM 1/8 TO 7 1/2 HORSE POWER

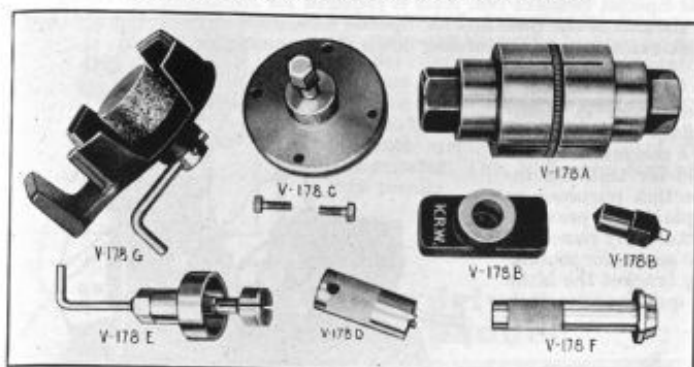
SPLIT PHASE
SINGLE PHASE
Repulsion - Induction
POLYPHASE
2 or 3 Phase
DIRECT CURRENT

If interested in a motor for any purpose, write us for prices.



KRW Generator Tools for V-8

Fits Ford Generators 1934 to 1936 Inclusive



Group No. V-178

Price \$11.00

If Entire Lot is Ordered at One Time

V-178A	Pole Piece Expander.....	\$3.00
V-178B	Pole Piece Screwdriver (Sq.).....	1.25
V-178C	Generator Pulley Puller.....	1.25
V-178D	Timken Bearing Adj. Wrench.....	.75
V-178E	Timken Bearing Race Puller.....	1.75
V-178F	Timken Bearing Race Driver.....	.75
V-178G	Brush Sander.....	3.25

Total.....\$12.00



This group of High Grade, accurately made KRW Generator Tools, when used in connection with a KRW Generator Test Stand, will enable Repairmen to quickly make complete tests and repairs on Ford Gener-

ators used on Ford V-8 cars. The same tools and mounting brackets can also be used in connection with any other make of Test Stand to bring them up to date. Many dealers are passing up real Profits by exchanging generators and armatures with someone who really does see Profits in this business. The majority of Generator failures are really nothing but possibly a bad bearing, poor brush contact or a "bridged" commutator. KRW Tools will save you Time, Delays, Cut down your Inventory of exchanges and enable you to make these repairs at a saving to your customer and a big profit for yourself. Remember—the customer always prefers his own generator that came with the car, to an Exchange. Cut down this sales resistance.

BRING YOUR OLD MACHINE UP-TO-DATE

If you already own a KRW Generator Test Stand (Built Since 1926) you can bring it up to date to handle V-8 Generators from 1934 to 1936 inclusive by purchasing this Group, plus the following items:—New Double diameter Motor Pulley No. V-178H, Price \$1.50 as shown on new Test Stand, Plus a new Generator Armature Drive Pulley No. V-178J, Price \$1.50 for 1935-1936 Models, Plus Group No. V-104, Price \$4.25 (Illustrated on next page) Generator Mounting Bracket, Pulley and Armature Centers at a total cost of \$18.00, and for \$18.00 additional you can purchase Group A-4 less Pole Piece Expander and Armature Pulley (which are already included in V-8 list) to handle all A-B Generators except the Power House type, for which we have another set of special tools available.

KRW Generator Test Stand for A-B-V-8

No. 42

Price \$44.50



See Following Page

The KRW Generator Test Stand with Armature Lathe and Mica Undercutter shown on previous page has been improved and brought up to date with a Two-Speed Pulley to make it more desirable. It has all of the important points of other Special Ford Test Stands plus a few exclusive features of our own. It will handle all Ford Generators and Armatures including Model T except the Power House type. Fig. 1—Undercutting the Mica, Fig. 2—Turning Down the Commutator, Fig. 3—Running-in Brushes and testing Generator. Fig. 4—Testing Armature and Commutator with Test Prods. The Pictures below show the Old Test Stand equipped with V-8 Attachments.

Generator Tools for "V-8" No. V104 Group Price \$4.25

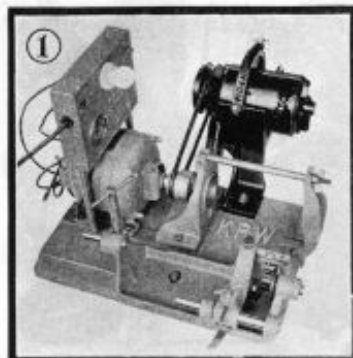
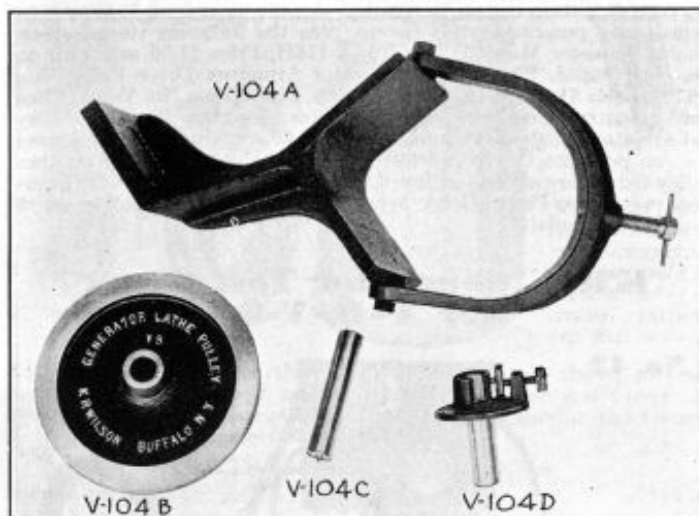


Fig. 1—A special pulley with center screws on the opposite end of the armature.

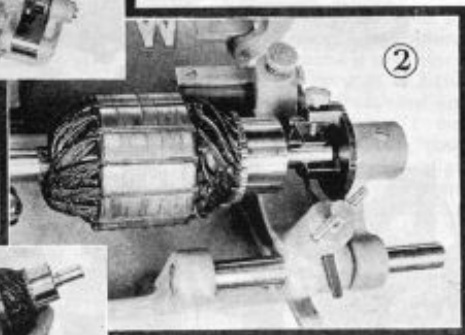
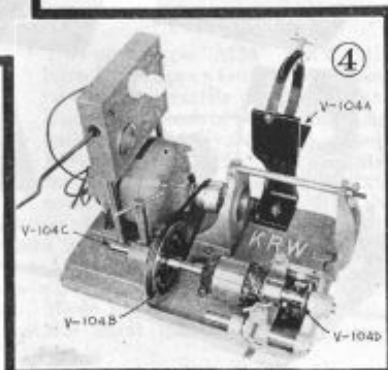


Fig. 2—Commutator being turned down. Mica Under-cut.

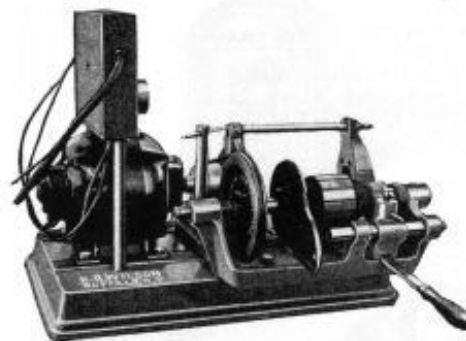
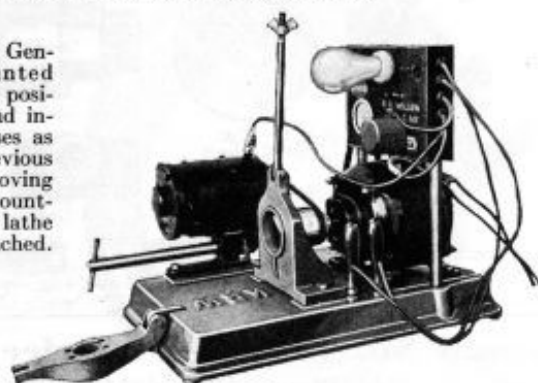


We are now quoting a Special Price of \$8.00 for the Armature Lathe and Mica Undercutter to be used with any other Test Stand or on a Bench connected to a 1/4 HP Motor. Keep this highly profitable work in your own shop.



The pictures in this column show how A and B Generators are handled on the old style as well as the latest type KRW Generator Test Stand. The Special Bracket No. A4B is required for mounting the Generator on the side of the Base and the Special Extension Pulley is required for a shaft extension, while turning down the commutator.

The Model "A" Generator is mounted in a convenient position for test and inspection purposes as explained in previous picture. By removing the generator mounting bracket the lathe is quickly attached.



Model "A" Armature in lathe—Commutator being turned and mica undercut. Note: It is unnecessary to remove the end plate or bearings—saves time and damage. A special extension hub pulley adapts the shorter Model "A" Armature to this lathe.

Group A4 Generator Tools No. A4 Price \$21.00

Shipping Weight 27 Pounds



This KRW Group of Generator tools, when used in connection with a KRW test stand, will enable repairmen to make complete repairs to the latest type Model A Generator. This group can be used in connection with most any other make of Test stand. Every dealer needs this outfit as essential equipment.

A4A Belt.....	\$.50
A4B Mounting Bracket.....	3.00
A4C Pole Expander.....	3.00
A4D End Plate Replacer.....	1.00
A4E End Plate Driver.....	1.00
A4F Pole Piece Screwdriver.....	1.25
A4G Brush Sander.....	3.50
A4H Special Generator Pulley.....	2.50
A4I Ball Bearing Remover.....	1.50
A4J Dust Ring Puller.....	1.50
A4K Reaming Fixture for End Plate Bushing.....	2.00
A4L End Plate Bushing Reamer.....	2.75
A4M End Plate Bushing Driver.....	.50

Individual prices when sold separately

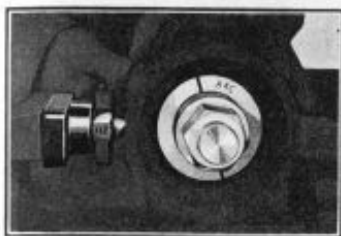
\$24.00



KRW Brush Sander

The K R W Brush Sander (No. A4G) for the latest type Model A generator, correctly aligns the brushes for full, parallel contact with the commutator. A recess is machined in the casting so that the brush holder is easily held in place as shown. A perfect brush contact prevents arcing and burning of the commutator. This tool saves time and gets results.

Pole Piece Screwdriver and Pole Piece Expander



The K R W Pole Piece Screwdriver (No. A4F) is shown in use. These screws must be set up tight. The Generator body is laid in a vise with the jaws wide open, the Screwdriver base is placed against one jaw and the vise then adjusted until the Screwdriver enters the slot of the pole piece screw. A Wrench is then placed on the Screwdriver, and it can be broken loose or tightened tight, without any danger of slippage or damage to the screw slot. Carelessness on this operation in not getting these screws tight allows the pole pieces to work loose and wreck the generator. Pole Piece Expander (No. A4C) should always be used when removing or replacing pole pieces. It prevents squeezing the housing out-of-round and guarantees proper clearance and ventilation between armature and pole pieces. This item is machined all over to insure accuracy. Every dealer needs these tools.



End Plate Driver



The K R W Generator End Plate Driver (No. A4E) is used in connection with Ball Bearing Remover (No. A41) for driving or pressing the shaft out of the end plate and ball bearing assembly as shown in picture on the left. The K R W End Plate Replacer Driver (No. A4D) is used to drive the end plate and ball bearing assembly on to the shaft. Can be used with a copper hammer or in an arbor press. Both tools are absolutely essential for results.



Generator Bearing and Dust Ring Puller



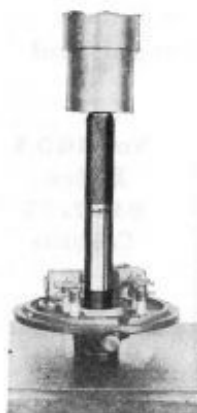
for toughness. It is a very useful tool and will save damaging lots of parts.

The K R W Dust Ring and Ball Bearing Puller (No. A379) is made from a drop forging, accurately machined and heat treated

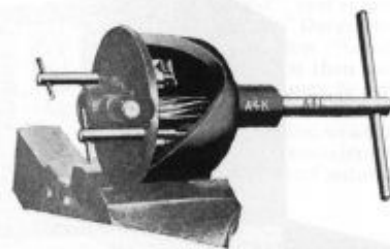
Generator Mounting Bracket

Generator Mounting Bracket (No. A4B) is shown on opposite page, attached to a KRW Test Stand. This Bracket can be mounted on a bench and used in connection with any other test stand—a longer belt being the only other change.

Generator Bearing Reamer, Fixture and Driver



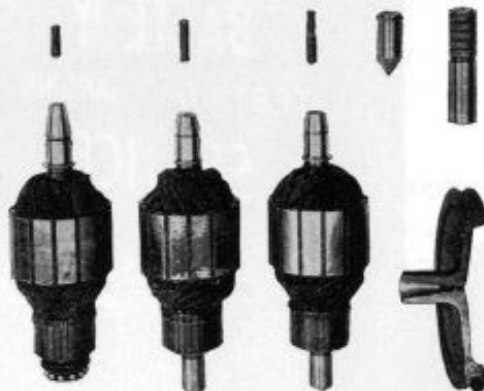
The K R W Generator Bushing Driver (No. A4M) is used to push the old bushings out, the new bushings in. The sheet metal bearing cover and oil cup should be taken out before removing or replacing the bronze bushings. It does a neat, workmanlike job.



The K R W Generator Bearing Reamer (No. A4L) and Fixture (No. A4K) is used to ream the generator outer end plate bronze bushing. A reaming fixture is absolutely necessary to secure an accurate bearing and perfect alignment. Please note this fixture is made with a boss on it to be held in a vise. It is also recessed to hold the end plate exactly as it is held on the generator housing. The two thumb screws secure it.

Special Pulley and Accessories

A Special Pulley (No. A4H) and three special adapter screws are necessary to handle the three styles of armatures now used in Model A Generators—on account of the difference of taper and size of cap screw used on end of armature shaft. A longer lathe center (for KRW test stand) and another armature driver is also required for the two newest styles. These parts are now included with all A4 Groups, although not shown in the picture of that group. This set will be furnished to previous purchasers of A4 Groups for \$4.25.



KRW "Growler"

No. 90

Price \$9.00

Shipping Weight 9 Pounds



Generator Armatures are easily tested on a KRW Growler. Turn on the switch, then twist the armature once around and the test is completed. It never wears out and is good for a lifetime. It is extra well constructed having a laminated core and extra heavy windings. Induces the same amount of current as if the armature were operating at 3600 RPM speed. If there is a short it is bound to show up.

BATTERY CHARGERS

Test-Charge-Sell more Ford Batteries

See: September 1934-1935 Ford Service Bulletins

KRW-"One Day" 6 Battery Charger and Testing Outfit



No. 460A

Price

\$122.75

Complete

Price

Less Charger

\$65.75

FOB
Factory
Belleville,
N. J.

Price
No. 460B
with
6 Battery
Half Wave
Charger
\$100.75

This attractive Battery Charger and Testing outfit, placed where your customers can't help but see it, will increase your battery sales and profits. It is not only a very attractive advertisement but a "full fledged" practical outfit designed for crowded places. Takes up but 4 square feet of floor space. The Charger is a "One Day" six battery, full wave type, (See page 95). The Battery Tester is the new, patented Four Meter Heyer System that measures the CAPACITY of the plates and the condition of the separators, like a

dynamometer measures the horsepower of an engine, by putting on a definitely known load as you would in actual service. It shows exactly what the battery will do without waiting for it to happen on the road. Thousands of Battery and Oil Stations have installed this system—that's why they are taking the Battery business away from you. Genuine Ford Batteries are so much better than most competitors' it is an easy matter to get back this business which really belongs to you. NOW is the time to "Cash In" on the Fall and Winter business—sell more batteries. Read the Service Bulletins. Chargers, Racks and Testing Units will also be sold separately when desired. See Page 95.

KRW-"One Day" 12 Battery Charger and Testing Outfit



CAPACITY

24 Fully Charged
Batteries Every 24
Hours.

\$158.00

Complete as shown
For 50 or 60 cycle
110 volt line

\$10.00 extra for
220 volts

UNDERWRITERS
"APPROVED"

Charger and Tester Shipped
from Belleville, N. J. Frame,
Panels and Bracket from Our
Factory, Arcade, N. Y.

This new KRW Combination "One Day" Battery Charger and Testing Outfit combines the finest and most efficient units ever made for charging and testing Batteries. It is compact and convenient. Floor space required—28x86 inches. The Charger is our latest "Full Wave," 12 ampere type (See page 95) with a capacity of 12 fully charged Batteries every 10½ hours, or 24 Batteries daily—if operated day and night. The new type Charging Panels, combined with Shuro, drive-in Connectors, further increase its all around efficiency, but may be omitted if the customer desires to save the cost of it. The Charging Rack is neat and compact. Frames are made of semi-steel castings of neat design. "T" Rails are covered with sheet lead to prevent corrosion. The top section has a capacity for 16 Batteries and the lower section accommodates 14. The "Dynamometer type" Battery Tester is mounted where it is most

(Continued on next page)

Continued from page 94

convenient to operate. A sheet lead covered Shelf is provided for holding the Battery while being tested. The outfit can be purchased complete as shown.—The 8 Battery Charger can be substituted or, any part can be purchased separately at the following prices:

- 1 No. 435 12 Battery "full wave" Charger.....\$75.00
- 1 No. 459 "Dynamometer type" Battery Tester..... 39.75
- 1 No. 132B 30 Battery Charging Rack..... 24.00
- 2 No. 440 Battery Charging Panels (6) at 8.00..... 16.00
- 1 No. 505 Lead covered Battery Test Bracket..... 3.25

It's a Real Outfit that will give you the best of Service and build the Confidence of your Customers—resulting in more Profits—more Battery Sales. See next column for prices on other cycles, voltages and prices on other sizes.

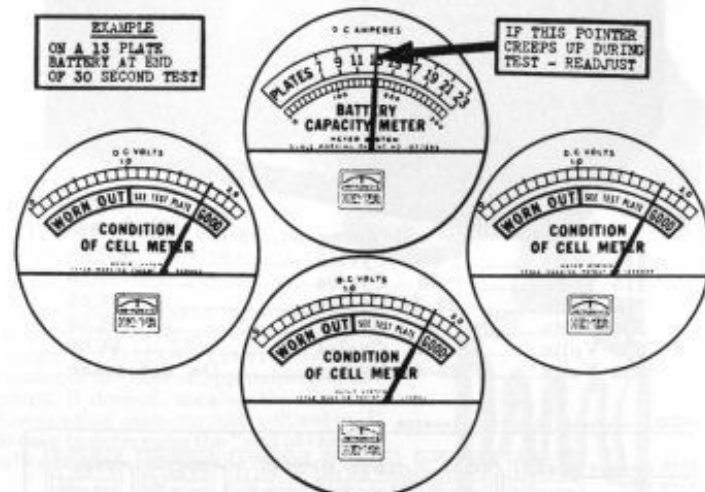
KRW "Dynamometer Type" Battery Tester

No. 459 Price \$39.75
F. O. B. FACTORY, BELLEVILLE, N. J.



The KRW-Heyer "Dynamometer Type" Battery Tester is the simplest and most accurate device yet known. It measures the actual output of the battery in a similar manner as a dynamometer measures the Horsepower of an Automobile Engine. Inasmuch as a battery starts to deteriorate from the day it is made, whether it is used or not, it is impossible to judge by the appearance of it whether it is good or bad. Therefore, the only way to determine its actual condition is to open the battery and inspect each plate and separator. This requires an expert Battery Man, takes time, delays the Customer and costs altogether too much money. Experience has proven, and nearly every Battery manufacturer in the country agrees, that a "HIGH RATE" test is the best way to

determine the condition of a battery—and with this Improved, Patented Heyer System of testing, it has been made a simple and easy operation for the Mechanic. It convinces the Customer, which after all is exactly what you want. The battery is connected as shown, then the Tester Control Knob is turned to the right, applying a "resistance load" equal to the average current draw of the starter of the car, as shown by the upper scale on the large 6-inch Meter. Turn the Control Handle until the Pointer is opposite the figures showing the number of plates in the battery. If it is a 13 plate battery, in first class condition, each of the other Meters (one for each Battery Cell) will show "Good", and remain steady, as illustrated in drawing. If the battery is "worn out" the pointer on the BATTERY CONDITION METER will drop below "Good" within 30 seconds. The BATTERY CAPACITY METER is then used to show the customer the true capacity of his battery which may be only 7 or 8 plates or even less. Such a battery is AT OR NEAR THE POINT OF FAILURE. You know beyond doubt that the battery is too weak for dependable service and should be replaced with a new one. This scientific Tester takes all the "bunk" out of battery testing and creates a Customer Confidence that sells Batteries.



KRW "One-Day" 12 Battery Charger

Requires 10½ Hours to Fully Recharge Batteries

No. 435

Price \$75.00

Shipping Wt.
125 pounds



Full Wave
12 Ampere

See Full Description in second column, page 94

115 Volts,	60 Cycles	.....	\$75.00
115 "	50 "	.....	75.00
115 "	25-40 "	.....	Do not make
230 "	60 "	.....	85.00
230 "	50 "	.....	85.00
230 "	25-40 "	.....	Do not make

KRW "One-Day" 6 Battery Charger

Requires 10½ Hours to Fully Recharge Batteries.

Continued Next Page

The KRW 6 Battery, Full Wave Charger is similar in design and construction to the 12 Battery size, except smaller. Two bulbs give the same fast charging rate. It also has all the other characteristics which have made KRW "One Day" Chargers so popular. It has been made for the Dealer whose business may never reach a large volume. This Charger does not require the line voltage equalizer, so none is included. The outfit is complete with 2 bulbs, fuses and 7 Shuro connectors. This Charger is used with the No. 460A Combination outfit illustrated on page 94.

No. 436

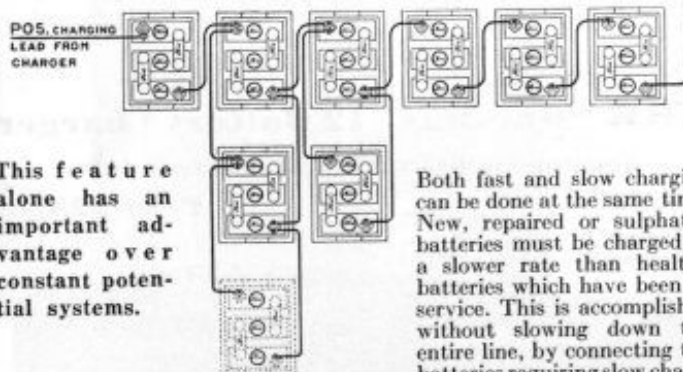


Full Wave 12 Ampere

Shipping wt. 75 lbs.

115 Volts.....	60	Cycles	\$57.00
115 Volts.....	50	Cycles	57.00
115 Volts.....	25-40	Cycles	65.00
230 Volts.....	60	Cycles	66.00
230 Volts.....	50	Cycles	66.00
230 Volts.....	25-40	Cycles	Do not make

NEG. CHARGING LEAD FROM CHARGER



This feature alone has an important advantage over constant potential systems.

Both fast and slow charging can be done at the same time. New, repaired or sulphated batteries must be charged at a slower rate than healthy batteries which have been in service. This is accomplished without slowing down the entire line, by connecting the batteries requiring slow charging, as shown in cut. Each additional connection cuts the charging rate in half. Nearly all battery manufacturers now attach tags to their new batteries bearing the following information: "Do Not use Constant Potential for initial charging". More batteries are ruined from over-charging with C.P. Systems than all other causes combined.

KRW "Half Wave" 12 Battery Charger

REQUIRES 24 HOURS TO FULLY RECHARGE BATTERIES

No.	115 Volts.....	60	Cycles	\$33.00
437	115 Volts.....	50	Cycles	33.00
Six	115 Volts.....	25-40	Cycles	41.00
Am-	230 Volts.....	60	Cycles	44.00
pere	230 Volts.....	50	Cycles	44.00
	230 Volts.....	25-40	Cycles	52.00

KRW "Half Wave" 6 Battery Charger

REQUIRES 24 HOURS TO FULLY RECHARGE BATTERIES

No.	115 Volts.....	60	Cycles	\$26.50
438	115 Volts.....	50	Cycles	26.50
Six	115 Volts.....	25-40	Cycles	31.00
Am-	230 Volts.....	60	Cycles	35.00
pere	230 Volts.....	50	Cycles	35.00
	230 Volts.....	25-40	Cycles	Do not make

A "Half Wave" Charger uses only one Bulb and rectifies only one-half of the Alternating current waves, therefore has only half as much charging capacity—requiring twice as long. KRW "Half Wave" Chargers are built to the same high standards as our others. The Cases are similar except slightly smaller.

10 Year Guarantee

KRW-HEYER Battery Chargers are guaranteed for a life of 10 years. By this plan, regardless of its condition through normal use, it will be reconditioned like new for 10% of its original cost for every year of service it has had. Bulbs are guaranteed and adjusted on a basis of 800 hours. This plan also applies to every KRW Charger now in use. Customer pays all transportation charges.



BATTERY CHARGER

DUAL RATE
FITS ANY MAKE CAR OR TRUCK

SUPPLIES THE ADDITIONAL CHARGING CAPACITY REQUIRED FOR RADIOS, HOT WATER HEATERS, DEFROSTERS, and other electrical appliances.

WORKS WHILE YOUR CAR IS IDLE

\$875

Keep your battery fully charged and full of "pep"

TWO CHARGING RATES 2 and 5 AMP.

Easily Installed ON THE DASH or UNDER THE HOOD IN ENGINE COMPARTMENT or ON GARAGE WALL

Entirely Automatic... NO BULBS, LIQUIDS or MOVING PARTS.

Fully Guaranteed for one year.
K. R. WILSON BUFFALO, N. Y.

PLUG IN ANY LIGHT SOCKET

OPERATES ON 25 to 60 CYCLE

This four color 13½ x 21 inch display easel will be included with orders for 12 or more.

JOBBER AND DEALERS DISCOUNTS

- 50 per cent in lots of 12 or more one shipment.
- 40 per cent in lots of 6 or more one shipment.
- 33 per cent in lots of 3 or more one shipment.
- 25 per cent singly.

Charger arranged for wall mounting as shown in center picture for charging batteries out of the car including 12 ft. extension cord, 4 ft. battery leads, with Mueller clips, \$9.75. (same discount)

Charger equipped for wall mounting with 12 ft. extension cords to and from charger and including steering post connector (as described on next page) so that several cars in the same garage, could use the same charger, \$11.00.

This new KRW Master Charger (DeLuxe) is designed especially for mounting on the car itself,—to go wherever the car goes, and "Plug-in" on any 110 volt, 25 to 60 cycle AC circuit, anywhere,—to supply the additional battery charging capacity required on cars equipped with Radios, Heaters, Defrosters and dozens of other electrical gadgets, also Trucks and Trailers equipped with numerous Marker lights, etc. in addition to normal load (Lighting, Starting and Ignition systems) for which the auto generator was designed to handle. Like a banking account, you can't pay out more than you put in. Therefore, a larger capacity generator and battery is required to handle a larger load under the same conditions,—otherwise some other method must be provided to recharge the battery while the car is idle. A KRW Master Charger is preferable, because once mounted on the dash or in the engine compartment, it is always connected to your battery and requires only

Continued on page 97

"plugging-in" to a wall plug or light socket to put it in operation. No effort at all! The 5 ampere rate will bring a healthy, but run down battery UP over night, so that the starter will "spin the engine" and assure easy starting and maximum efficiency for all electrically operated devices and accessories. The 3 ampere "TRICKLE" Rate is used to keep the battery Full-of-Pep at all times, depending on the amount of over-load and the proportion of day and night driving done by the car owner. The KRW Master Charger cannot overcharge because the charging rate tapers automatically, as the battery reaches full capacity. The KRW THERMAL RELAY (U. S. Patent No. 1954931) protects the Charger from battery leakback in case Power circuit fails. A 10 ampere fuse protects the battery circuit. No other Charger COMPARES with it! Not "skimped" to meet price competition.

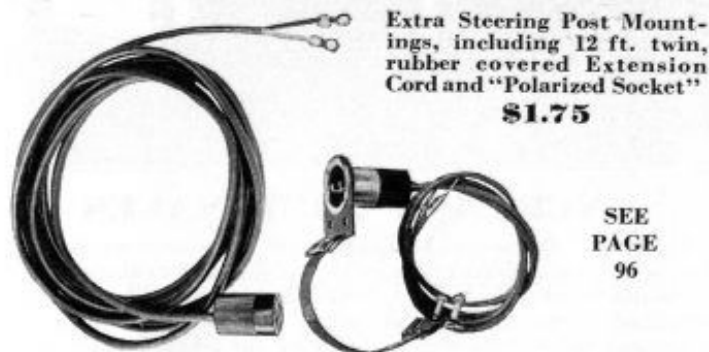
Compare This Charger with All Other Makes!



SIZE
7 1/2 x
4 1/2 x
3 1/2

1 YEAR
UNCONDITIONAL
GUARANTEE

TWO CHARGING RATES — 3 and 5 AMPERES
50% Larger Transformer, Works on any Cycle 25 to 60.
LARGE CAPACITY—Actually 5 1/2 Amps. at 110 Volts.



Extra Steering Post Mountings, including 12 ft. twin, rubber covered Extension Cord and "Polarized Socket"

\$1.75

SEE
PAGE
96

KRW "All-Steel" Battery Storage Rack No. A393

Shipping Weight 65 pounds

\$11.50

The KRW Battery Storage Rack is intended primarily for storage of New Batteries in the stock room, but can be used for storage of re-charged and rental batteries. All-steel electric arc welded construction, capacity 25 Ford batteries.

KRW Rotary Hack Saws

For Installing Clocks, Ash Trays, Heaters, Defrosters



No. 499 1 3/8 Inch \$2.00
No. 475 2 1/4 Inch \$2.40
No. 113 3 Inch \$2.50

KRW Rotary Hack Saws use replaceable Blades and Drills. Extra Blades cost 55 cents each either size.

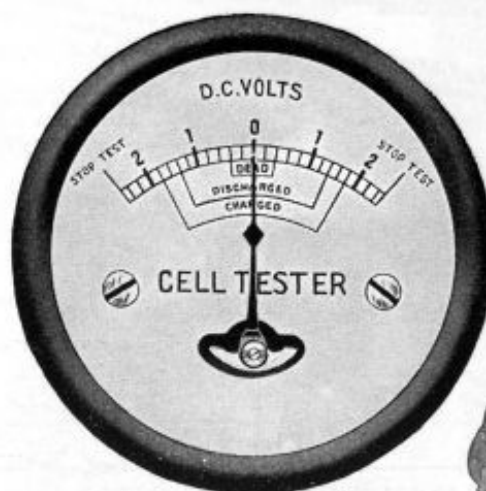
The 1 3/8 Inch for Defrosters used with FORD Heater. 2 1/4 Inch for Electric Clock. 3 Inch for Ash Trays and Ford Heaters. It will pay you to have these inexpensive tools on hand to properly install these profitable accessories. Make the job easy for your Mechanics.

KRW Cell Tester

No. A350

Price

\$5.00



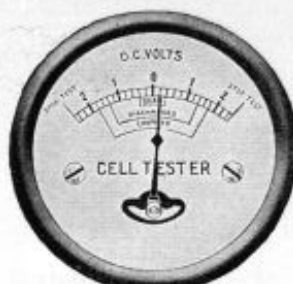
It shows your customer the exact condition of each cell without removing the battery from the car.

← Actual size.



A convenient, quick test that can be made ANYWHERE — ANY-TIME. The meter revolves to any angle—the dial carries its own light for easy reading in dark places.

Meter is moving-vane type—2 1/2 inches in diameter, equipped with a specially designed LOAD-SWITCH which disconnects the load of approximately 200 amps. if desired, making the Tester a low-reading open-circuit voltmeter. It is easy to determine the "end of charge" when batteries are on the charging line.



A DEAD CELL shows up immediately when the prods are placed across it, and the meter reads the cell condition—IN ENGLISH, so the car-owner can SEE and READ it. A new battery or at least a repair job results.



A DISCHARGED CELL is at once indicated on the English-reading dial—and a charging job, or generator adjustment job results.



A FULLY-CHARGED CELL in good condition shows up just as quickly. This instrument builds up confidence in your service.

It is desirable for the Small Dealer, Service Station, Fleet Owner, and Independent Repair Shops. Of Course, it is not nearly as impressive, nor does it give as complete and accurate information as our large "Dynamo-meter" Type Tester illustrated on page 95.

(C) No wonder those engines are smooth—they are built like a fine watch.

(S) Look at those light-weight pistons—they are balanced within 3 grammes.

(C) Gee, I didn't realize a V-8 Ford Engine was built so accurately.

(S) You will probably never need a motor overhaul but it's nice to know you can get a factory rebuilt so reasonably.

(C) That's some Crankshaft!

(S) "Seeing is believing." We like to show you the inside of a Ford Engine.

(C) Are those the Hard Steel Valve Inlets—

(S) A Ford V-8 Engine is as simple as the old Model T.

(C) I thought a V-8 Ford Engine was more complicated.

(C) We are ready to trade right now.

CONVINCING THE PROSPECT



(C) Do you mean to say that I get a completely rebuilt motor with all those parts for that price?

(S) That rebuilt motor is exactly as good as the new one that came in your car.

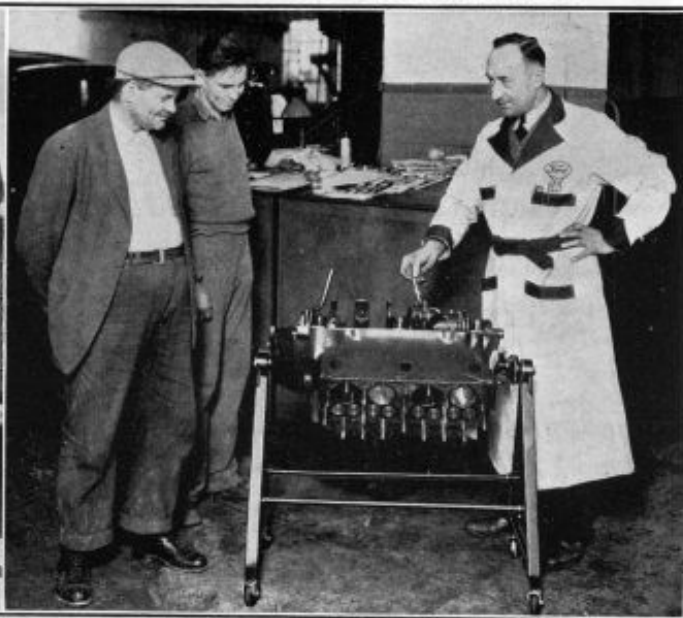
(S) Yes, this factory rebuilt exchange motor actually costs less than an overhaul job.

(C) It cost me \$10.00 a day to lay up my truck. I can make the cost of the exchange motor in a few days.

(C) If you can install that rebuilt motor this afternoon, go right ahead and I'll wait for it.

(S) These motors are rebuilt by the same men, materials and on the same machinery used to manufacture new motors.

SELLING A MOTOR EXCHANGE



**KRW "Revolving" Display Stand
No. V-175
Price \$17.50**



The KRW "Revolving" Engine Display Stand has been designed and built especially for Show Room Service—to display and demonstrate Ford V8 Engines to the best advantage. The frame is neat and strong. Semi-steel castings are used. All parts are hand filed then finished in a high grade, glossy red, baked enamel. Three-inch rubber tired, ball bearing casters are supplied.

Shipping
Weight
75 Lbs.
Crated

INCREASE YOUR SALES

Almost every Automobile Manufacturer is now competing for Ford business—in the same price class—with a car design that's almost identical in appearance so far as Body, Fender, Radiator and Wheel design is concerned. Because of the fact that most cars are sold on "eye appeal" a customer has only to put them all in a hat and take his choice. However, there is only one V-8 and when this wonderful engine is brought out in the open, where your prospect can see and examine every part to appreciate its simplicity and advanced construction, then your competitors are "licked." A salesman has only to point out such features as the light-weight Pistons and Rods which are balanced to not more than 3 grammes variation; The mammoth Counter-Balanced Crankshaft; Hard Valve Seats; Mushroom type, cast alloy steel Valves; Removable Valve Assemblies; Light-weight, hollow Push Rods and dozens of other features as only Ford V-8 Engine construction permits—and the prospect is satisfied that it is a better job and worth more money. Lift your Sales Department out of the rut and "SELL FORD V-8's" at a profit instead of trading them for used cars at a higher bid than even your competitors will offer. The Ford V-8 offers greater value, dollar for dollar, than any competitor and when Dealers sell themselves on this fact, then they will make some money. This new KRW "Revolving" Engine Display Stand will supply that missing link in your sales talk and help put the story over convincingly. Use one of those Factory Rebuilt Engines you have in stock. The only extra cost is \$17.50 for the Stand itself. The profit on an extra sale of an Exchange Motor more than pays for it and an extra car sale will pay for seven of them. Order one today, then you will buy more of them for other departments.

SEE! September 1935 Ford Service Bulletin.

KRW Industrial Unit with Ford V-8 Engine

No. 504

Price \$335.00

Complete, Tested, Ready to Operate

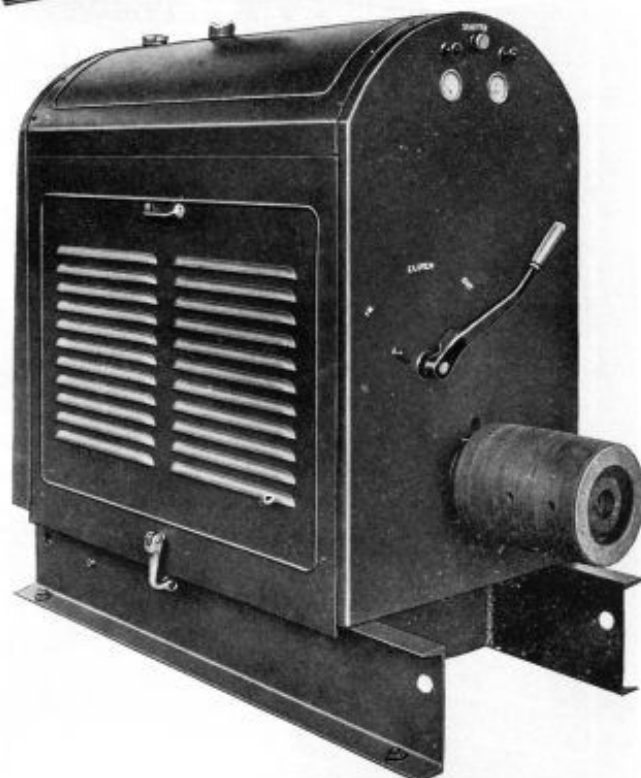
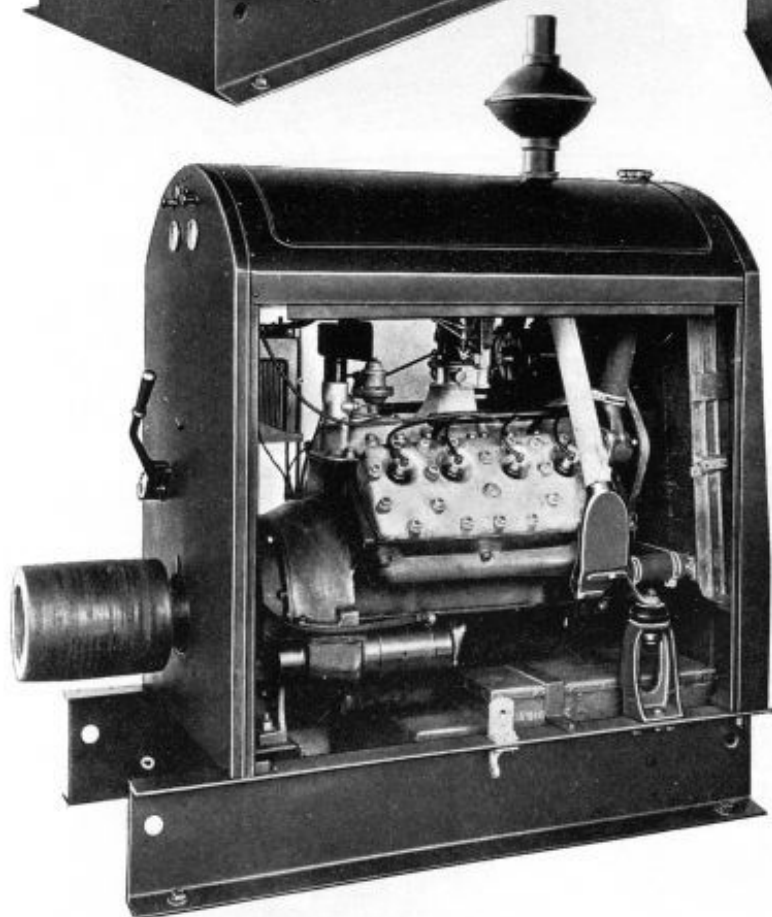
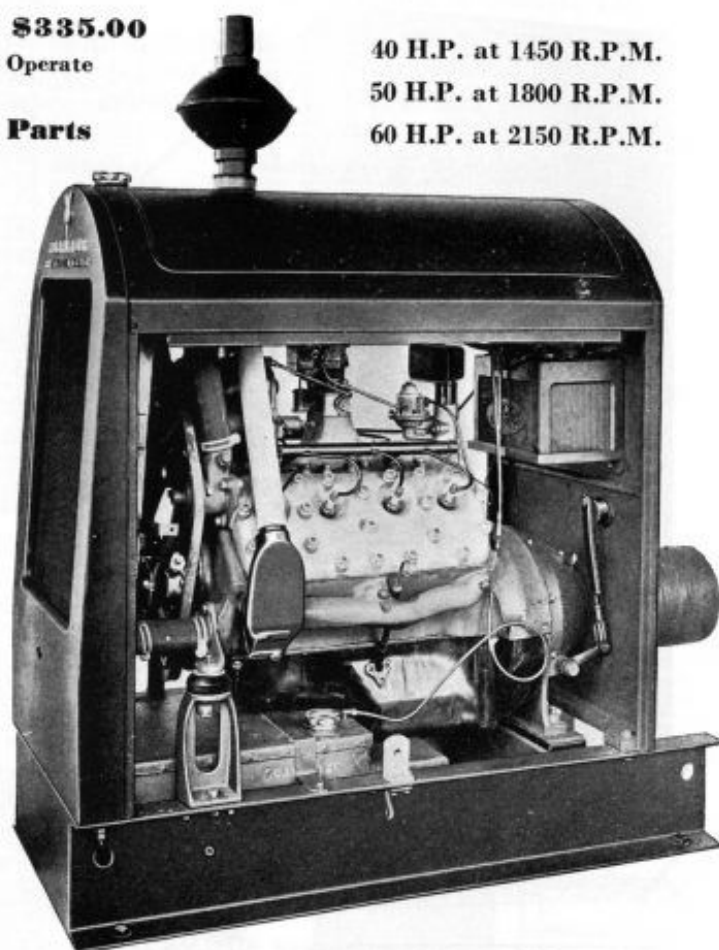
or

\$153.00 Less Ford Parts

40 H.P. at 1450 R.P.M.

50 H.P. at 1800 R.P.M.

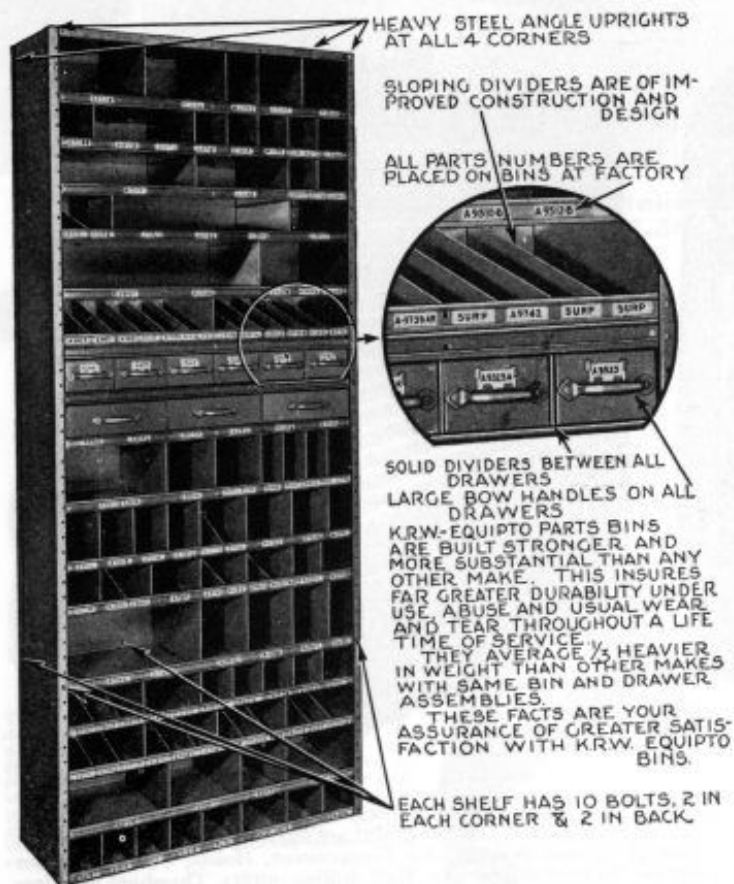
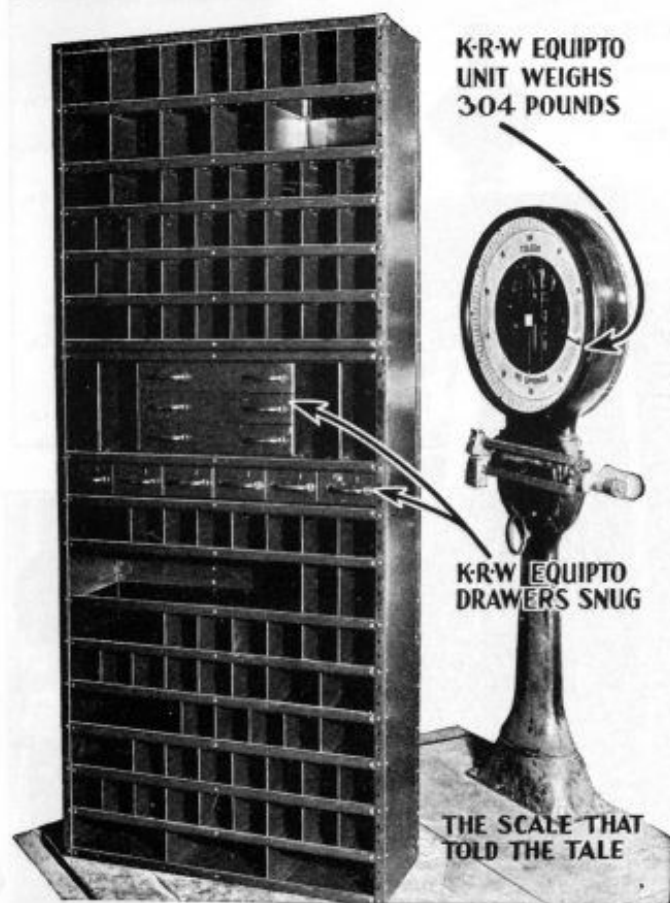
60 H.P. at 2150 R.P.M.



Ford V-8 Engines are supplying power for hundreds of different uses and in many places where power is demanded for day and night operation, over long periods of time, and under severe operating conditions. Users praise these Engines for their unfailing power and ability to stand up under hard service. The entire engine building industry knows no closer limits of precision, no better manufacturing methods than those used in building Ford V-8 Engines. That's why they are being used for so many different purposes.

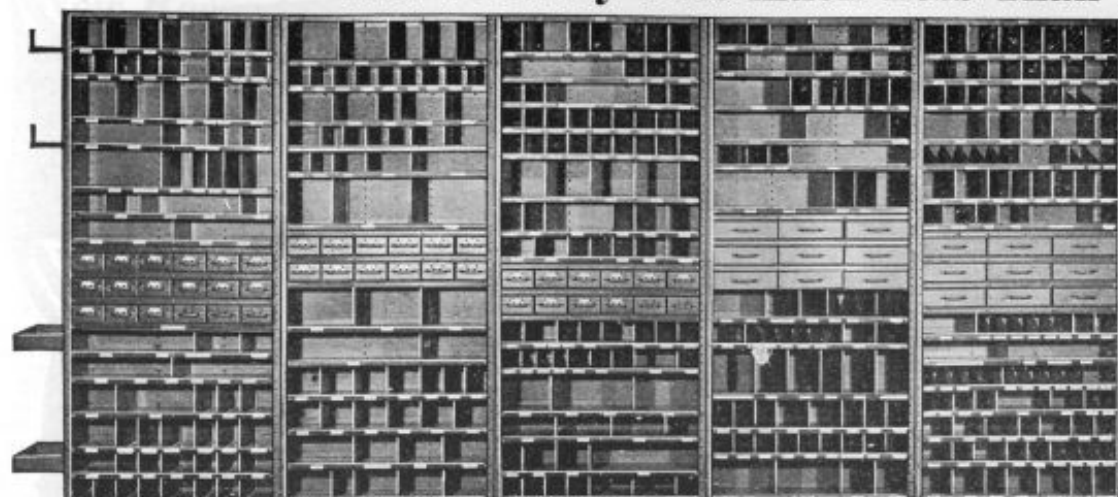
A Brand New Field is open to the wide-awake Dealer. The sales possibilities are tremendous! The Net profits are interesting. These Units can be used to operate Welders, Air Compressors, Hoists, Fire and Water Pumps, Amusement devices, Well drilling outfits, Threshing machines and a hundred and one other kinds of power applications. Circulars showing many uses to which these engines can be put, together with Engineering Data, Operating Costs etc. will be available for Ford Dealers use.

WHAT 78 EXTRA POUNDS OF STEEL MEAN IN ONE BIN UNIT



COMPARE EVERY DETAIL OF K-R-W-EQUIPTO BINS WITH OTHER MAKES

KRW-Equipto Parts Bins Are Worth Twice As Much —and Actually Cost much Less Than Competitors'



All
prices
F. O. B.
Factory,
Aurora
Ill.

**KRW-EQUIPTO
BUILT TO
LAST!**

KRW-Equipto "Island" Merchandiser

- No. 1341 Size 44" x 5'-2", with aerial shelf and glass price tag holders, etc. Price \$41.92.
No. 1342 Size 8'-2" x 4'-4" Complete \$68.64.
No. 1343 Size 11'-2" x 4'-4" Complete \$95.36.



No. 1304 Wall Merchandisers in units 3' long, 7' high. 5 units shown in picture, Price per unit \$17.06.

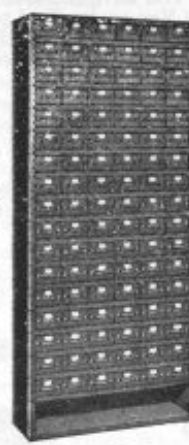


We make the above statement without any fear of contradiction. Please check the facts disclosed by the pictures, etc. on opposite page and we feel sure you will appreciate that KRW-Equipto design and quality construction is so far superior to any other competitor that there is no real comparison. KRW-Equipto Bins are rigidly constructed—do not bend or twist when loaded with Parts because they are built and braced like a skyscraper. Greatest care is used in making the parts and assembling the units. If interested to purchase new Bin Systems, or Parts and Drawings to reconstruct your present equipment, write for KRW Prices and Complete Catalog. We can supply the finest equipment made and save you a lot of money.

A Few Standard Items Selected at Random



No. 404 \$15.00



No. 426 \$77.00



No. 97A \$8.75



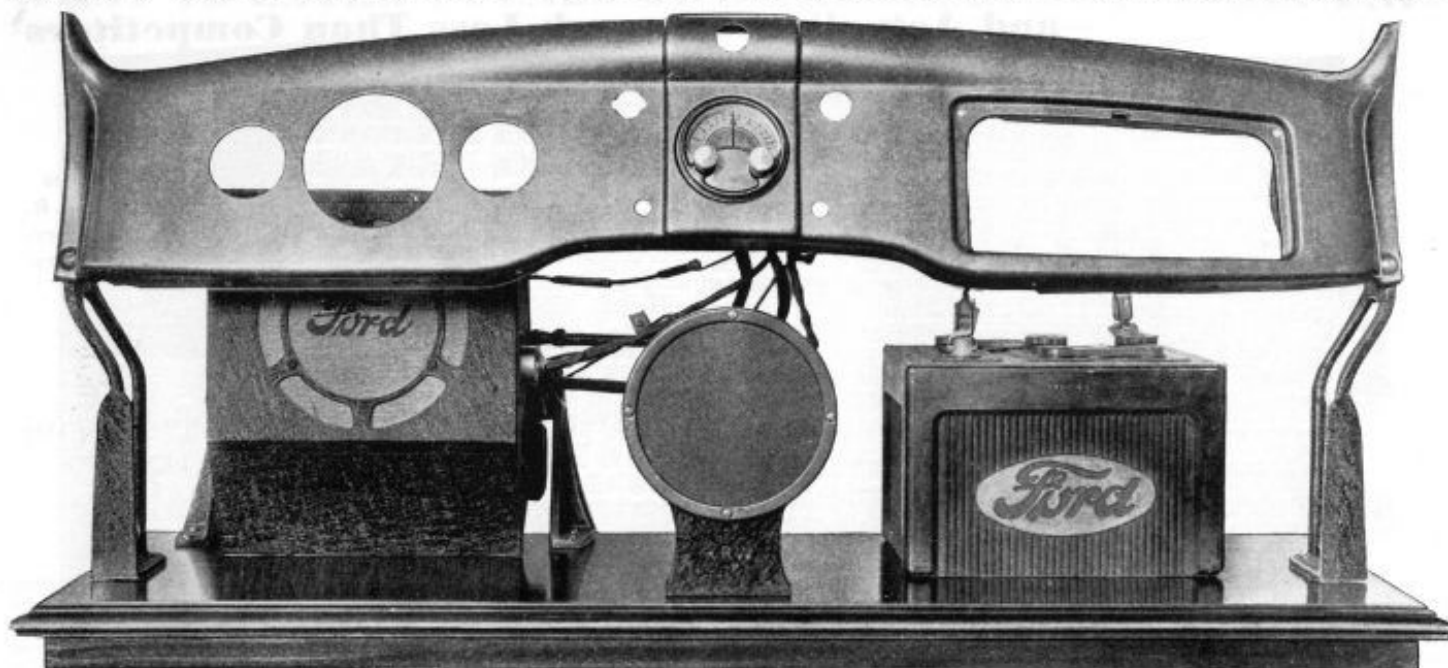
No. 497 \$24.00



No. 294 \$21.50

Write For Complete KRW-Equipto Catalog

Display and Demonstrate Ford Radios—\$12.50 Net Profit on Every Sale



KRW Radio Display Features

No. 456A

Price \$10.00

This new KRW "Philco-Ford" Radio Demonstrator, placed where your customers are sure to see and hear it, will bring in a lot of EXTRA DOLLARS PROFIT for you. Millions of Ford owners are buying Auto Radios from radio and accessory stores Mail Order houses and maybe from your competitors. You have the first chance at this business. It's profitable—don't lose it! You can't afford to let a dollar profit get away from you. This outfit is unusually attractive and well made. It really attracts attention. We supply a hand-rubbed hardwood base, finished to correspond with the instrument board,—cast aluminum mounting brackets for instrument board and radio set, finished in baked enamel, wrinkle finish to match radio; copper screen antenna, mounted in the base, and all other necessary wiring, bolts, clamps, etc. You supply the instrument board, radio and battery from your parts stock. Nothing is altered or mutilated—all parts remain salable merchandise. Your investment is small. The profit on your first sale more than pays for the special equipment we furnish. The outfit can be assembled, ready to operate, in twenty minutes. It is also used to demonstrate Batteries, Clocks, Gas and Temperature Gauges and other accessories, which mean more dollars profit for you. Specify for 1935 or 1936 dash.

B-L Auto-Radio Filter Pack

No. 458

Price \$12.50

Especially designed to operate Auto Radio Demonstrator sets. Equipped with the new heater type tubes, direct from any 110 volt, 60-cycle, alternating current light socket. It is always ready to go and gives the same uniform results at all times as when operating the radio set with a new, fully charged battery at maximum efficiency. Dealers using batteries for current supply often forget to



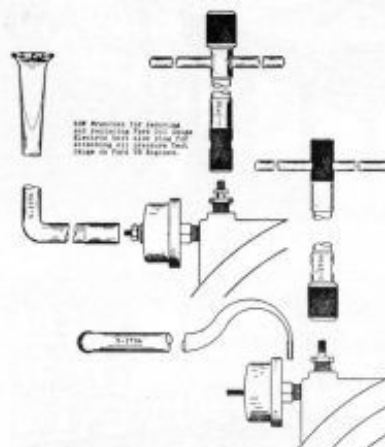
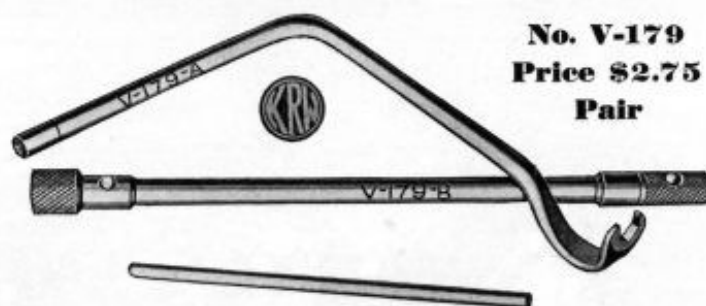
recharge or exchange them after a big program has been played and when the prospect comes in for a demonstration excuses have to be made, which breaks down the customer's confidence and he probably goes elsewhere and makes a purchase, while he is in the mood. The profit from the sale of one radio set pays for it. It can also be used as a battery charger, also for supplying direct current for demonstrating electric hot water heater, fans, horns and other such devices which ordinarily use battery current. It is simple, compact and there is nothing to get out of order. No liquids or moving parts to cause radio interference. KRW price is about 35% less than regular price. Shipping weight, 21 pounds. Fully guaranteed for 1 year.

KRW "Electric Oil Unit" Wrenches

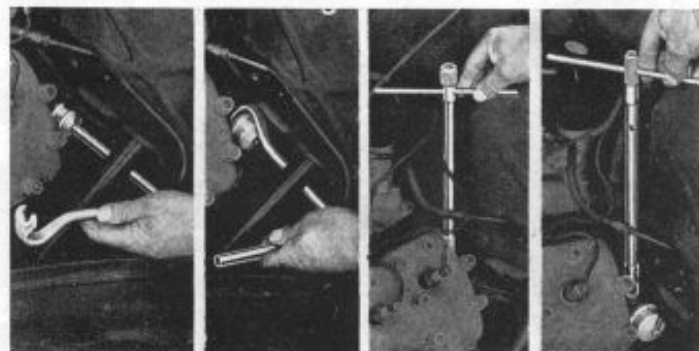
No. V-179

Price \$2.75

Pair



These new KRW "Electric Oil Unit" Wrenches are designed especially for use in connection with the Ford Laboratory Test Set,—and will save a lot of time in removing the plug for oil pressure tests, also in case of removing and replacing "Electric Oil Gauge Units." They are made of tough drop forgings, accurately machined and heat treated. The V-179A Angle Wrench has an open, offset socket to fit the gauge itself and on the other end, a small Hex socket to fit the Terminal Nut. The V-179B Wrench is also made with two sockets—one for the cable bracket nut, the opposite end to fit the plug itself. You need these tools.



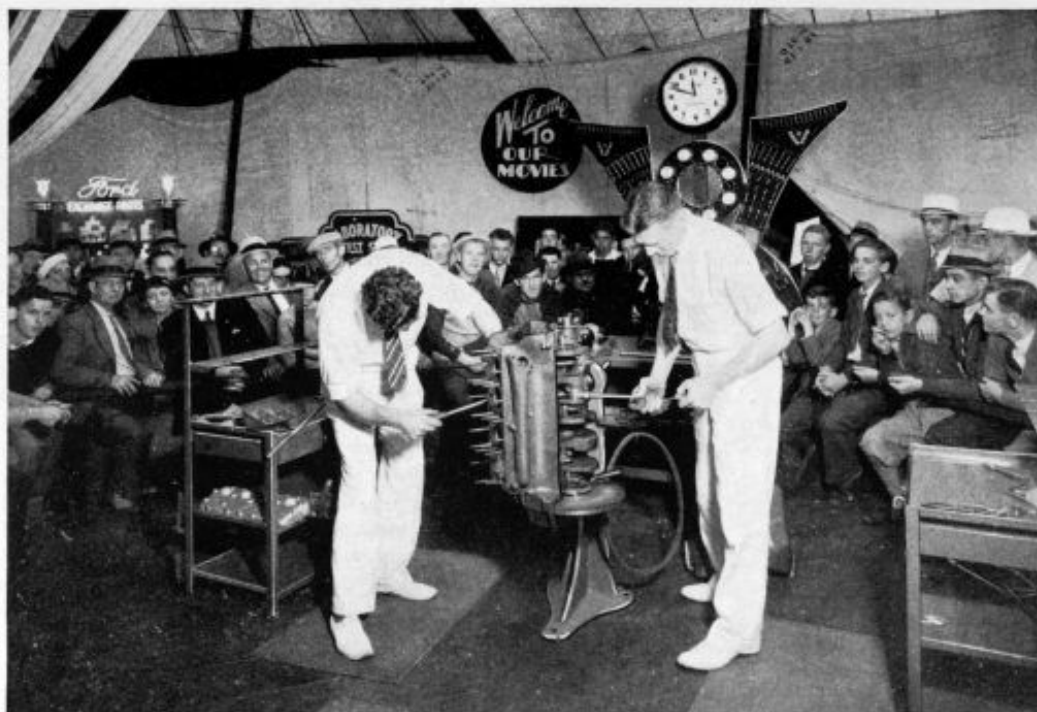
Mechanics Make New Record

Buffalo mechanics make new record at State Fair

Handling their tools with almost incredible deftness and speed, Ted Kessler and George Coolidge, star mechanics of Ford Motor Company's Buffalo assembly plant, smashed the world's record for assembly and disassembly of a Ford V-8 engine at the New York State Fair recently. Their official time as recorded on a large clock in full view of spectators was five minutes, 40 seconds for the tear down, and eight minutes, 23 seconds for the buildup. This is three seconds better than the previous record. Only standard tools found in every Ford dealer's service department were used.

The assembly and disassembly demonstration, a feature of the Ford dealers' exhibit at the State Fair, was staged seven times daily before large crowds to indicate the simplicity of design and ready accessibility of each part of the Ford V-8 engine.

**The KRW All-Position Motor
Stand Contributed its Share
See it on Page 2**



Ted Kessler and George Coolidge assembling and disassembling Ford V-8 engine

I N D E X

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" " Replacement for "Big Boy"	79	Breaker Spring Tension Scale	54	Drills, Twist	8
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Automatic Alcohol Dispenser	65	Cleaner, Vacuum	84	Electric Motors	90
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Axle Correction Tools	40	Cleaning Tank	65	Engine Stands	2
Axle Dollie, Rear	41	Clutch Compressors	4	Expansion Reamers	17
Axle Stand, Front and Rear	41	Combination Machine—Group No. 1	20	Ezy-Out Taps	9
Axle Tools, Front, Car	30	Attachments for B Engines	23	Figures, Engine Block	5
Axle Tools, Front, Truck	31	Attachments for A Engines	24	Floor Patch	68
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Axle Tools, Rear, AA Truck	49	Hand Operated Cyl. Reboring Machine	24	Fuel Pump Diaphragm Tool	55
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